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Criticon Febrium:

OR, A

Critical ESSAY

ON

FEVERS.

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Sir Hans Sloane *Bar^t.*
Guil. Gibbons,
Humph. Brooke,
Jacobus Ladd,
} *Cenſores.*

Datum in Comitiis Cenſoriis, 4to. Menſis Maij, 1716.

Criticon Febrium:

OR, A

Critical ESSAY

ON

FEVERS;

WITH THE

DIAGNOSTICKS and METHODS of CURE, in all the different Species of them.

To which is prefix'd,

A Large INTRODUCTION concerning the USE and ABUSE of the *Mathematicks* in PHYSICK, and the BASIS on which *Indications* are founded: Where also the *Euodia Medicorum* is annex'd.

By EDWARD STROTHER, *M. D. A. Coll. Christ. Cantab. & Coll. Med. Lond. Reg.*

The Second Edition, carefully Revis'd and Corrected, with Additions, and a large Index.

LONDON,

Printed for CHARLES RIVINGTON, at the *Bible and Crown* in St. *Paul's Church-yard*. 1718.

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To His EXCELLENCY

Don Iſidro Caſado

Of *Azevedo* and *Roſales*,

Marquis *de Monteleon*, Viſcount of *Alcazar Real*, one of His Moſt Catholick Majeſty's Supreme Council of the *Indies*, Gentleman of the Bed-Chamber, and his Plenipotentiary at *London*.

May it pleaſe Your EXCELLENCY!

THE Honour I have of being Ally'd to Sir *Francis Arther* of *Madrid*, having readily procur'd me your *Excellency*'s Favour, I know not whether I am moſt to admire *your*

Lordſhip's Good-Humour or Friendſhip to my Relation; ſince, as a Stranger, there were Grounds enough to have deferr'd complying to any Requeſt 'till farther Inſpection.

Should I preſume to give any *Encomium* upon your Excellency's Good Parts, it would be ſomewhat extraordinary indeed, when I conſider that You are ſent hither as *Plenipotentiary* from the Court of His Moſt Catholick Majeſty, where *Wiſdom* and *Politeneſs* are diſtinguiſhing Characters, that *Auguſt Aſſembly* was always allow'd to inherit; and that You are deputed by *It* to tranſact the Affairs of that wiſe Nation, with the moſt ſharp-ſighted Court in the World. Therefore I ſhall only Crave Leave to ſubſcribe my ſelf,

Your EXCELLENCY's

Moſt Oblig'd,

Moſt Obedient,

and Moſt Humble Servant,

Edward Strother.

THE PREFACE.

THE TREATISE *I now venture to Publiſh, was not intended for the Preſs, when I firſt Wrote it; tho' I ſhall not mention the Reaſons that induc'd me ſo to do. If I advance Facts, and give Reaſons for my Proceedure; if neither the Undertaker nor Publick, loſe their Pains, nor think their Monies ill ſpent; that will be a ſufficient Recompence for my Endeavours. If the World ſuffers not by me, I may, If Leiſure allows, give them farther Proofs of my Well-wiſhes.*

The Book is ſwell'd far beyond what I at firſt deſign'd; for I was not aware of many Circumſtances which occurr'd, when I review'd my Papers: But I hope the Peruſers will find their Account in what I advance, having endeavoured to ſay as little on every Paragraph as the Nature of the Subject would allow: For I did not think

think it neceſſary to expatiate upon the uſual, and, I think, uſeleſs Diviſions of Fevers; *in which much Time, I fear, has been ſpent by many, to little Purpoſe. The Task has been undertaken by many Learned Pens, and many more have fallen ſhort in their Aims; the former have eterniz'd their Names, and obliged their Poſterity with laſting Monuments, on which are engraven the Methods to be truly ſerviceable to Mankind; and the latter are not unworthy Thanks for their kind Endeavours, in communicating their Thoughts for the Publick Good, altho' they have not wrote ſo learnedly; for tho' they have fail'd in Style and Thought, if they have ſpoke Facts, their Writings deſerve a grateful Return.*

However, I am ſure I have built the following Tract entirely upon many Years Obſervation; and they who will cenſure, may go ſcot-free; for I am not at leiſure to return Anſwers to ungenerous Criticks, nor ſo obſtinate as to perſiſt in an Error, when I am once appriz'd of it.

The Language was the Choice of the Undertaker, not my own; and yet, I believe, 'twill fail of being ſerviceable to any who have not ſome competent Knowledge in the Materia Medica; *this I had in View, to prevent too much medling in ſo grand a Concern, as is the Jewel of Life: And as the Circumſtances of too*

many

many will not allow of a regular Attendance from the Beginning; ſo ſome Meaſures chalk'd out for the Uſe of thoſe Gentlemen who were pleas'd to favour me with a Call, to their Patients Aſſiſtance, when the Diſeaſe was much advanc'd, will, I hope, give Sanction to the Plainneſs of the Style. If it contain any Errata *beyond the Literal, nothing can atone for it.*

As far as I have had Opportunity to obſerve, more than the Third Part of Mankind fall by this diſmal Diſtemper; and the little Leiſure there is to amend any Miſtakes, committed at the Commencement of a Fever, in all the ſubſequent Stadia, *ought to make the Perſons who Practiſe, ſeriouſly to conſider what Sort of* Evacuation *ought firſt to be attempted, and how far the Strengths of the Patient will allow* Them *to be continued or reiterated: For to ſpeak juſtly,* on Theſe *depends the whole Art of Curing Fevers; and the Neglect, or Prepoſterous Uſe of* Them, *have convinc'd too many of the Truth of what I advance; ſince* Alteratives *produce their Effects but ſlowly.*

I ſhall add no farther, than to tell you, that I have avoided to advance any Notion, which did not ſquare with the Practice; nor any Practice, but what has all the neceſſary Diſtinctions, I could think of Uſe to aſſiſt the Judgments of thoſe, whom Cuſtom has prevailed to call firſt, in order to Prepare a Patient; which

is

is sufficient to denominate this Undertaking generous.

In this Second Edition, the Literal Faults, which were not few, I hope will be found to be carefully corrected: In the First Edition, I was totally a Stranger to Corrections of the Press, so that the Faults in it were the more pardonable; and moreover, I wanted Patience for such a Revisal: But now having carefully revis'd and amended it, I have left the other Task to such whose Business it is, and I doubt not but the Reader will be better satisfied.

In this Second Edition, I have also chang'd some, and omitted other Parts, to wit, where I found some Opinions were suppos'd to be too severely censur'd. I should have been far from thinking this wou'd have given a Handle to any Reproach; however, I have now avoided all Brangles, and may reasonably suppose I shall be no further expos'd to any Mal-Treatment. Where-ever I was obscure, I believe I have here made an Atonement for it; for I have added so much to such Paragraphs, as to take off all Handle for Cavils, and prevent Misapprehensions of 'em.

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ERRATA.

PAge 15. line 23. read *not.* p. 16. l. 24. r. *reſectam eámq;* p. 17. l. 7. for *are* r. *is.* p. 23. l. 15. for *up* r. *upon.* p. 27. l. 34. for *6* put 3. p. 35. l. 1. *and* 2*d.* r. *priori.* p. 41. l. 21. r. *ſupply.* p. 45. l. 24. dele the Parentheſis. p. *ibid.* l. 36. r. *otherwiſe.* p. 46. l. 23. r. *quieſcere.* *ibid.* dele the Parentheſis entirely, beginning at l. 23. and ending at l. 24. p. 49. l. 16. for *on* r. *upon.* p. 68. l. 33. dele *the.* p. 171. l. 33. r. *ſurface.* p. 175. l. 31. r. *Æquilibrium.* p. 182. l. 30. dele *very.*

THE INTRODUCTION.

SECT. I.

Of the Uſefulneſs of the MATHEMATICKS, *to Humane Affairs.*

THERE is hardly any of the vileſt of Trades which don't draw ſome Rules from this Noble Science; thus Porters uſe their Cranes; Maſons their Levers, Pulleys, Levels, and Rules; Carpenters their Meaſures; Ship-builders *model* their Ships in ſuch a Form as they find proper for making 'em puſh their Way with the leaſt Reſiſtance. In fine, nothing falls under the Notion of Quantity, but what lies under the Direction of this Science: So that they, whoſe Education is liberal, ought to be fraught with ſo extenſive a Knowledge, in order to make them uſeful to the State, their Families, and their Neighbours. However, I am not for perſwading Gentlemen to apply themſelves to this laborious Study, ſo as to fall in Love with it; and, by too intenſe an Applica-

tion, to turn Hermits, and render themſelves unfit for common Converſation: Leave this to the Profeſſors of it; but glean from them what is uſeful to your own Buſineſs, and leave the Remainder to themſelves. And whenever you have learn'd what you would be Maſter of; remember, not to endeavour to extend your Part of the Knowledge to what it concerns not, nor to draw Concluſions pernicious to Mankind from thence.

I would therefore have the *Merchant* perfect in his Numbers, and all the Parts of Arithmetick belonging to his Trade; for without it he muſt neceſſarily ſtarve himſelf and his Family; the *Navigator*, without his Trigonometry, is a ſorry Friend to his Merchant; the *Eſſayer*, without his Specifick Gravity, or the common Method of Eſſaying, is an Enemy to the State; the *General Officer* fails in one of the uſeful Parts of his Duty, without the Art of Embattelling; the *Gunner*, if he is ignorant of the Elevation of his Piece, or does not know that Flanking is to a direct Shot, as 3 to 1, will not perform the Duty that is juſtly required of him from his General, nay, his Country. What does a *Fortificator* without the Knowledge of his Angles of Defence, but dupe his Prince, and expoſe his Subjects to Ruin and Deſtruction? What Value is the *Miner* of to his Maſter, who neither knows the Laws of *Hydroſtaticks* as to Levelling, nor the Knowledge of *Powers* and *Reſiſtances* as to Lifting? And therefore no Wonder ſo many are chous'd out of their Eſtates. What Acres of Ground do the poor Tenants pay for, which they never enjoy; whilſt a *Common Meaſurer* encreaſes the Degrees in his *Theodolite*, to flatter his Gentleman into a Belief that he enjoys double the Number of Acres he really does, and to engroſs a few Pence into his own Pocket? How uſeful are the Arts of making and framing the ſeveral Sorts of *Lens's*, to diſcover the

the Figures of Bodies, for the Short-ſighted, for the Old, for the Sailor, and for many other Uſes? Should I expatiate more upon this Affair, a Chapter would ſwell into Volumes; which is foreign to my preſent Purpoſe, having no farther Deſign in this Section than to hint at the Uſe of the Mathematicks in General; which I believe I have ſufficiently done, when I have let you ſee how many Affairs of great Moment 'tis abſolutely neceſſary to.

SECT. II.

Of the Uſe of the Mathematicks, and Experimental Philoſophy, in the Knowledge of our Humane Bodies; and of ſome Data *from the ſeveral Branches thereof, drawn into Uſe.*

I AM not of ſo harſh a Diſpoſition, as not to accept of ſeveral *Data* from the Mathematicians, which, it is to be own'd, are prettily enough adapted, by many, to the Purpoſes they demonſtrate them for: But I am of Opinion, that it is an affected Shew of Learning always to demonſtrate theſe Truths in ſuch a Manner, as that a Book of Phyſick, ſave its Title, ſhould appear rather a Point of the Mathematicks diſcuſſed, than any uſeful Diſcovery in the Art of Healing. I ſhall here recite ſome few of thoſe *Data*, which need not be demonſtrated, but ſuppoſed: And whoſoever deſires them proved in a Mathematical Manner, would do well to conſult the Authors, they are borrow'd from, at their leiſure Hours.

In every Fluid *there is a Gravitation and a lateral* Preſſure, *which is perpendicular to the Tangent of the Circle.*

Hence 'tis concluded, that the Blood, in our Arteries and Veins, preſſes downwards and ſidewiſe; or, as the learned *Bellini* has it, the Blood's Motion is Longitudinal and Latitudinal. From this lateral Preſſure it happens that our Veſſels are Circular; and as the Veſſels are of that Form, all their Ramifications are of a ſimilar Shape; and as the Glands are only Complications or Contorſions of Arteries, they are of the ſame Shape, and therefore alſo are their Orifices.

The Preſſure of the Incumbent Fluid upon a Solid, is in Proportion to the Altitude; or, as Dr. *Wallis* will have it, *The Moments of a Fluid preſſing upon a Fund, are a Rectangle under the Quantities of Matter and the preſſive Velocity*; which is Sir *Iſaac Newton*'s Law of Motion, *That Moments are equal to a Rectangle under the Celerity and Quantity of Matter.*

Hence may it be concluded, that the Blood's producing any Effects on the Solids, ſuch as the opening Obſtructions in the Nerves, or elſewhere, muſt be an Argument of its Quantities being encreaſed, or its *Pondus*; or that it is ſtock'd with *nimble Agents* and *volatile Salts:* By either of which the Obſtruction is dug down, and the Nerves are freed from their *Infarctus.* Hence alſo may be drawn the Reaſon of *Hæmorrhages*, which, by the Quantity of Blood, either endanger a Rupture; or which, by the ſwift and nimble Circulation of it, does equally, by its Intumeſcence or a Percuſſion, or ſome other Effect of its ſwift Motion, rend and tear the ſlender Orifices of the Veſſels, and ſo occaſion a Flux, which bears a Proportion to the Degree of its Motion. Or the greater the Quantity is, or the more ſwiftly the Blood moves, the more dangerous are the Symptoms produc'd. 'Tis inferr'd from this Maxim,

Maxim, that Bodies plung'd under Water are conſiderably more preſs'd upon, than in the Air; becauſe Water is to Air as 800 to 1; and the Sea-water is heavier, by $\frac{1}{70}$ Part according to *Pere Thomas*, than common Water. Hence 'tis obſerved, that the Cork will be preſs'd into the Bottle, when 'tis plac'd deep into the Sea.

Fluids running from a larger Syphon into a leſs, the Liquids run with a greater Velocity in the leſſer Tube: But if the total Sum of the Orifices of the leſſer Tubes be more numerous than the Area *of the tranſverſe Sections of the greater, then the Fluids run ſlower in the leſſer Tubes.*

Hence it is concluded, that if all the Orifices of the Capillary Arteries were (put together) leſs than that of the *Aorta*, the Blood would run faſter in them than in the *Aorta*; the contrary of which is demonſtrably true; and therefore the Blood circulates ſlower in the Capillaries than in the *Aorta:* And hence are ſo many Stagnations in the Evaneſcent or Capillary Arteries; which happen from the Cones growing narrower towards their *Vertex*, or, in other Terms, from the Arteries Straitneſs at their *Anaſtomoſis.*

Fluids cannot move on, unleſs the impelling Forces conquer the Reſiſtances.

Hence if the Force of the Heart's Motion were not ſuperior to all Impediments in the Arteries, and elſewhere, the Blood would ſtagnate, and run no longer. And *Borelli* has, in his *Oeconomia Animalis*, demonſtrated that the Power of the Heart is to that Reſiſtance, but as 1 to 45, or 3000 to 135000: and that were it not for ſome other Power, the Circulation muſt ceaſe of courſe; which auxiliary Im-

pulſe he places in the *Percuſſion*, or the Jerk and Shock it throws off its Load by; and ſo we again return to the Law, that the *Moment is a Rectangle under the Quantity of Matter and the Celerity*; where there is a Defect in the *former*, it muſt be made up by an Encreaſe of the *latter*; or the Reſiſtances wou'd remain ſtronger, and the Fluids wou'd ſtagnate.

Thus when we labour under a Penury of Spirits in a Fever, the Criſpations of the Fibres will be augmented by the Heat of the Blood, and will occaſion the Impediment to Motion to be more manifeſt; and the Spirits flowing ſparingly, through the Channels of the Nerves, will alſo leſſen the Force of the Percuſſion; ſo that there muſt, in this Caſe, inevitably follow a full Stop to the Circulation, and the Thread of Life muſt be cut off; if then theſe Powers are not equally proportion'd, many and dreadful are the Conſequences of the Deſtruction of this *Æquilibrium.*

All Fluids flow through their Channels only with their Exceſs of Velocity above the Reſiſtances.

So that let us ſuppoſe a Fluid to be impell'd with a Force equal to 47, and that the Reſiſtances are equal to 35, then the Fluid only moves on with a Velocity equal to 12. for $47 - 35 = 12$.

Hence in *Cachexies*, and other Diſorders proceeding from the Languid and Teſtudineous Motion of the Blood; the Alteratives muſt be given to ſuch a Proportion, as to augment the Motion, not only 'till it comes to an exact *Æquilibrium* with the *Reſiſtances*, but till we make it arrive to that Exceſs of Velocity which the Nature of that Perſon, we have under our Care, has been known formerly to be accuſtom'd to, when he enjoy'd a perfect Health. The Knowledge of this is gathered by collateral Proofs, the Diſcuſſion of which appertains not to our preſent Enquiry.

In

In all Fluids there is a Center of Gravity, and *Gravitation*, viz.

The Center of Gravity is an imaginary *Axis*, which is ſuppoſed to paſs in a perpendicular Line to the Bottom of the containing Veſſel.

So that whatever Poſture we are under, the Particles of the Blood gravitate upon ſome Part of the Veſſel: *If our Poſture is Erect*, then the Gravitation is on the Orifices of the lower Veſſels: *If Horizontal*, each Column gravitates by Lines perpendicular to Tangents to the Circular Sides of the Veſſels. Hence in *Hæmorrhages of the Uterus* an erect Poſture contributes extremely to promote it; but an horizontal one helps to allay it: Thus, *vice versâ*, in *Hæmorrhages of the Noſe*, an erect Poſture is moſt convenient.

The Altitudes of Projectiles are to each other in a duplicate Ratio *of their Velocities.*

Suppoſe then that the Heart of any Perſon throws out its Contents to the Head, with a Velocity or Force equal to 2, and that another propels its Fluids with a Force equal to 3: I then conclude, that if the Blood of the one wou'd be thrown 4 Inches, that of the other wou'd be thrown 9 Inches forward. This I look upon to give Light to a Phyſician, in bleeding his Patients, in the Knowledge of the Force of the Heart; for where the Blood of one Perſon will flow to the Diſtance of one Yard and half, or 54 Inches, from the Arm into the Diſh, the other flows only to the Diſtance of half a Yard and half quarter, or 22 Inches $\frac{1}{8}$. From hence alſo may be gather'd the imminent Danger Patients are under in Ardent Fevers; where the Force, the Blood is thrown withal up to the Head, violently impacts it into the *Cortical*; nay, I have (in the Diſſections of ſuch as died under this Kind) found

it deeply thruſt into the *Callous* Subſtance, and in a pretty large Quantity; from whence incurable Phrenzies muſt often enſue. From this Head, I would adviſe ſome unwary Practitioners not conſtantly to tread a Road, too common in Fevers, of giving *teſtaceous* Medicines, nay, much warmer Cordials, and flaying their Patients with Numbers of Bliſters; when, if they conſulted Reaſon, and not Prejudice, they would eaſily view what Shoals they precipitated to the Grave by this Butchery. However, *I would not here be ſo miſunderſtood, as if I cry'd down the judicious Uſe of theſe Medicines and Applications*; becauſe that would be acting againſt the Bent of common Senſe; ſince it will abundantly appear in the Treatiſe annex'd, that I have adviſ'd 'em, and even have endeavoured to encourage their Uſe at proper Seaſons: but I am afraid their *indiſcriminate* Adminiſtration and Application have not proved too ſatisfactory to the Adviſers of 'em, nor ſucceſsful to the Patients, in ſome Caſes and States nam'd below.

Cylinders are to each other in a Ratio *compounded of their Baſes and Altitudes*; that is, if the *Baſe* of one Cylinder be 9, and of another 6; and the *Altitude* of the one 4, and of the other 2; then are they to each other, as (4 X 9 =) 36 to (6 X 2 =) 12.

Hence are the Quantities of Liquors, circulating in our Veſſels, meaſur'd: Hence are the Quantities of Secretions proportion'd; for that it is eaſy (admitting there be no other Adventitious Cauſe, which I ſhall mention immediately) to believe that a greater Orifice will ſeparate a greater Quantity, and even the moſt coherent Sort of Fluid in any given Time: For indeed I ſuppoſe the Celerity of the Blood's Motion to be *determin'd*; becauſe when that is augmented, it alters the Queſtion extremely.

Some

Some will have it, that a greater Quantity of Blood, or a greater Celerity of its Motion, will occaſion a larger Quantity of ſecreted Fluids: But others, who argue from ſtern and patient Enquiry, find that the larger is the Quantity of the Fluids, or the ſwifter is their Motion, beyond a certain *Pitch*, the leſs is ſeparated. Who are the beſt Judges in this Diſpute, will appear from this, that the one alledges Facts, and the other begs the Queſtion. We may then ſuppoſe the Caſe to ſtand thus; as to the *Quantity*, that alone does not always encreaſe the Secretion; becauſe we ſee that as the Bladder, over-diſtended with Urine, cannot then perform its ordinary Duty, of Expulſion, by the Contraction of its Fibres; ſo may we ſay, in ſome Meaſure, of the Arteries, which are ſo over-loaden with a rarified Quantity of Contents, that they, in like Manner, cannot ſufficiently contract themſelves, nor, *then*, protrude their Contents through the ordinary Emiſſaries; and conſequently they do, at that Time, ſeparate leſs. This will be no Surpriſe to any who conſiders, that whilſt the Bladder retains its Elaſticity and contractive Power, by this it contracts its Coats, and extrudes its Contents with Eaſe: becauſe here the Elaſticity is ſuperior to the Reſiſtances: But whenever the Reſiſtances conquer this elaſtick Power of the Muſcular Coat, then there neceſſarily follows a Suſpenſion of that Action. Now in an *Iſchury* (from this Cauſe) the Direction is ſo alter'd that the Sides of the Bladder cannot act, becauſe the *Liquidum Nervorum* and Arterial Blood, from whence this Power of Motion is derived, cannot now enter into the Bladder. And moreover, becauſe in ſuch a Caſe, the Preſſure on the Sphincter is only equal to a Column of the Size of its Orifice, all the reſt of the Fluid having now a different Center of Gravity. In like Manner, the Arteries will loſe their Power of Contraction,

traction, and conſequently of Protruſion. Nor will the *Celerity* of Motion *alone* contribute to augment this Secretion; becauſe that, augmenting the Longitudinal and progreſſive Motion, weakens the Latitudinal; and conſequently Secretion: Since the Glands are generally lateral, and plac'd at an Angle of 45 *Deg.* Nor will the *Quantity* and *Celerity* conjoin'd, promote the Secretions; becauſe the progreſſive Moments will be augmented thereby; and little Leiſure will be given for dropping the Contents laterally. But becauſe theſe Examples may not be ſufficient to convince a prejudic'd Perſon, I ſhall mention an Experiment of injecting Fluids into a Syphon, which we ſuppoſe to be bor'd in ſeveral Places, to adequate the Caſe: If any Liquid is thrown with a violent Force into this Tube, very little or none will exude through the ſmall Emiſſaries, but 'tis all of it hurried along the larger and direct Orifice: For that the longitudinal Preſſure here is much ſuperior to the latitudinal one, (the only two Directions placed in Fluids.) However, when the *Latitudinal* becomes ſuperior, the contrary happens; from whence it appears, that a determinate *Æquilibrium* is requiſite to Secretions; and what is beyond this, then too much or none at all is ſecern'd. But a Practitioner will be yet more convinced by Experiments drawn from Practice; which, for his Satisfaction, I ſhall ſtoop to do, and then draw this Paragraph to a Concluſion. Thus I have known it happen, that with opening a Vein, the *Menſes* have immediately return'd, and an *Iſchury*, from *bloody Urine* ſuppreſs'd, has been quickly reliev'd; which happy Changes either proceeded from the Diminution of the Quantity, or Celerity of the Circulating Maſs, or of Both. As for the *decreas'd Celerity*, don't we ſee it very common in dying Perſons, where the Motion of the Blood is very ſlow, that the Lungs ſeparate a great Quantity of *Mucus*

into

into the *Bronchiæ*; which, ſo long as the Spirits are ſo plentiful as to contract the Parts, is thrown out; but whenever they fail, then it choaks them? Is it not a common Experiment to tie one of the Jugulars of a Dog, and we find immediately that his *Saliva* is ſpued from the Salival Glands more plentifully? The ſame Experiment made below the Heart, is found to fill the Cavities of the Body with a Load of *Serum*, which Dr. *Lower* looks upon as one Occaſion of a Dropſy. The ſame Mechaniſm holds alſo true in Convulſions about the Head, where the Motion of the Blood through the Arteries is impeded by ſuch a Diminution of their Diameters, as that they become thereby nearly obſtructed: And hence, as a Sequel of this in theſe Parts, I have ſeen an Inundation from *Serum* in the Ventricles, which indeed may alſo Evene from the Return of it impeded through the *Infundibulum*. Catarrhs are often a Conſequence of a ſlow Motion of the *Lympha*, or its Return hindred thro' the Lymphaticks. In fine, daily Experience convinces the Gentlemen of the Faculty, who have had Opportunity to obſerve Nature's Laws, that after we have been ſpent with profuſe Evacuations of Blood, we are often infeſted with Dangerous *Diarrhœa's*, which are only the Effects of a looſe Texture and a ſlow Motion, as well as of a Paucity of Spirits, ſo that the Fluids drop through their Glands where the Center of Gravity is directed downwards, ſidewiſe, *&c.* Hence may the whole be affirmed, to-wit, that *Determinate Degrees* of Quantity, of Celerity, and of the *Magnitude* of Orifices as well as of *Contraction*, muſt contribute to Secretion; beyond or below which Degree, there is either no Secretion at all, or too much: But we ſhall enter into further Particulars of this Diſcourſe in *Pag.* 26.

Canals that are impervious from any Extraneous Body, muſt, by ſtrait'ning their Alvei, *be made to paſs their*

their Fluids: If they are impervious by their Rapidity, we muſt uſe Sluices to hinder their rapid Courſe: If they are impervious for the Want of Fluids, Sluices alſo help this Fault.

How far this Maxim of the Hydroſtaticks can be adapted to humane Bodies, I cannot certainly affirm; however, I ſhall deliver my Sentiments upon a Point or two, which it ſeems to account for, without offering to pronounce too dogmatically. The Ancients, in Fevers of the *malignant* Kind, have often advis'd *Bole*, *Terra ſigillata*, and ſome ſuch other *ſtyptick* Drugs, in order, as they ſuppoſed, to contraſt with the malignant Particles that had empoiſon'd the Blood and Juices. I obſerve theſe very Medicines mentioned by later Practitioners, in their Books of Practice; and the Reaſons they give for their Acting, is, as they are pleas'd to term it, *To conglutinate the Craſis of the Blood*, whoſe *Compages* is here ſuppoſed to be too looſe; and from hence it is ſuppoſed to ſeparate ſo eaſily into the *Cutis*, thoſe *Blotches*, or whatever *Eruption* is made from the Blood. I ſaid, I obſerv'd it had been mention'd in their Books; but if you conſult their Files, you will rarely, if at all, find any Drug of that Nature blended with their other Medicines; which to me is an Argument, that when they write, they think themſelves oblig'd to give Reaſons to the Publick, they themſelves are not fully ſatisfied with. Give me leave to follow their Examples, in the Account I am going to give of the Virtues of theſe *Stypticks*, which yet I would gladly they ſhould be perſuaſive, and introduce again what the Ancients had doubtleſs obſerv'd to be uſeful. Shall we look upon the Retention of ſome Parcels of the *Perſpirable*, (which a Learned Author ſays, is unequal in its Texture, and in *Malignants* calls it *viſcid*) to be this extraneous Body? Let it for once be granted me; I ſay then, That ſuch a

viſcid

viſcid ſhould be attenuated to a ſufficient Pitch for a critical Expulſion; it is neceſſary the Blood, or Blood-Veſſels ſhould receive ſome Change in its Texture or their Oſcillation, or ſome ſuch probable Way, in order to bring this about. I cannot ſee a more likely Method to compaſs this Deſign, than by an eaſie Suppoſition; and this I reckon to be done by changing the Diameters of the cylindrical Cones and Syphons into much narrower Limits, which we all know to be a Vertue aſcrib'd to *Aſtringents*; for by this very Mechaniſm, it will fall out that the Elaſtick Force of the Arteries will be encreas'd in a *Ratio* to a Diminution of the Diameters of theſe Cylinders; and whereas Tubes of a minute Diameter circulate their Fluids with a much greater Celerity than do thoſe of larger Diameters, it may thus be reaſonably ſuppoſed that the Elaſticity of theſe Fibres being augmented, but their Diameters diminiſhed; the Fluids, embrac'd between Fibres that have receiv'd ſuch a double Change, will be more ſtrongly compreſs'd, comminuted and agitated, as well as run on in a more continued Stream, and more nimbly than before, which to me, ſeems to be all that is requiſite to hinder the ſeceding of ſuch Eruptions, and to attenuate this Viſcidity: As to what concerns the other Medicines commonly given in ſuch Fevers, 'tis a Diſquiſition appertaining to another Head.

I remember to have heard, from a Lithotomiſt, ſomewhat, which then to me appear'd very paradoxical, That to make a Stone paſs thro' the Ureters, he look'd upon Claret (which all of us know to be a *Styptick*) to be the beſt *Diuretick*, and what would make it paſs the ſooneſt. This Mechaniſm, you ſee, holds in cleanſing Rivers from their Sand and other extraneous Bodies; whether it holds true in the Caſe of a Stone in the Kidneys, I ſhall not now take upon me to determine, but ſhall leave it to the

the Enquiry of ſuch who have Opportunity to obſerve.

Action and Reaction are equal.

This grand Maxim holds true in many Inſtances: Without this *Æquilibrium* the Blood would ſtagnate; for unleſs the reſtitutive Power of the Arteries in their *Syſtole* were exactly equal to their uſual Dilatability in their *Diaſtole*, the Fluids contain'd would be preſs'd into 'em ſo copiouſly, that the Blood would ſtop at the Section of Reſiſtance; and from thence at the neareſt Section to that, up or down, to the very Heart, and ſo occaſion inevitable Death; which I take to be the Caſe in common *Apoplexies*, where the Laxity of the Fibres firſt ſuffers the Blood to lodge in the yielding Part, and from thence enſues gradually a Stop, till it can, for the Want of a free Paſſage, run no longer. By this Maxim, we find the *Denſity of the Air to be reciprocal to its Compreſſion*; ſo that whilſt the Compreſſion encreaſes, the Denſity of the Air equally encreaſes; and, *vice verſâ*, whilſt the Compreſſion is taken off, the Air is leſs denſe. Hence it might be inferr'd, that if the Moon acted on the Sea by Attraction or Gravitation, our Air would ſuffer ſome Change in its Action, and the Mercury would either riſe or fall at ſuch Times: But this, not being a certain Conſequence, ſeems to happen, by Mr *Boyle*'s *Coſmical Qualities*. Hence alſo *the Air's Elaſticity is reciprocal to its Extenſion*; ſo that if we live in a lower Region, the Column of Air that preſſes upon us, is much higher and heavier than when we live in mountainous Places; ſo that they whoſe Lungs are ruptur'd, and who ſpit Blood, live uneaſie where the Air preſſes the Veſſels too much, and thus keeps the Fraction always open; but are help'd by a Removal into an Air leſs compreſs'd, (avoiding any Extreme on this Side too:) And

And they who are Aſthmatick, and want to have their Lungs more expanded, ought to live in a low and dry Region, ſomewhat inclinable to Cold, where the Air will be more compreſs'd, and their Breaſts will be more opened. Hence we ſee, in the common Experiment of a Bladder, half inflated, and removed to a Mountain, how it expands and ſwells. Hence 'tis that *the internal Air* (contain'd, I mean, in a Fluid) *expands or contracts reciprocally, as the incumbent Atmoſphere expands or contracts itſelf*: Whence it is that Bottles in Hot Weather will crack; (nay, when the Air is drawn off, they will burſt, tho' placed under the Water:) Becauſe its *Denſity* in ſuch Weather is much diminiſh'd. From this Quality of the Air, it happens that our Blood in Hot Weather occupies a greater Space, and occaſions, in ſuch a Seaſon, Fits of an *Aſthma*, *Rheumatick Pains*, *Febrile Diſorders*, and ſuch-like: Whence in Cold Weather, when the Air is much contracted and heavier, the Blood almoſt loſes its *Elaſticity*; becauſe then *Coagulations* of dangerous Conſequence often enſue. But having hinted at this Principle, I ſhall no add farther Remarks.

The Attraction of Bodies, is as the Squares of their Diſtances.

Hence at a greater Diſtance there is leſs of this Power exercis'd; at a leſs Diſtance it is greater: that is, if I ſuppoſe two Parcels of Salts; one at the Diſtance of 3 Inches from its Fellow; another at the Diſtance of 5 Inches; then as 9 is to 25, ſo is the Attractive Force of the one to the other.

Almighty God has plac'd a *Magnetiſm* in the World, and we find it, in ſome Meaſure, plain on ſeveral Heads: Hence, when ſuch attractive Bodies are ſegregated at a tolerable Diſtance, they loſe their Force of Attraction; but at ſmall Diſtances they coaleſce: Thus, *Salt* of *Tartar* flows by the Attraction

Attraction of Water, which is not eaſily call'd off: But ſo much is ſaid of this, in Mathematical Authors, and more eſpecially in Sir *Iſaac Newton*'s *Quære's*, at the end of his *Opticks*, that little further need be ſpoke of it here. As to the Original Cauſe of it, he ſuppoſes it to proceed from ſome Impulſe, or perhaps ſome unknown Way. If then any Diſeaſes are occaſioned by the Juxta-poſition of ſuch Bodies as will unite into ſome *Tertium Quid*, and ſo bring on various Symptoms, the eaſieſt Method us'd for ſuch Coheſions in Chymical Experiments, is, Dilution; and this is beſt done by the Liquor heated, the Motion of which diſſociates, whilſt the Quantity enlarges the Diſtance of the attracting Salts. Hence it may not be amiſs to obſerve a Caution which *Baglivi* (*p. m.* 474. *de Morborum & Naturæ Analogiſmo*) brings upon the Caſe of Rheumatick Pains; after due Evacuations, by Bleeding, after a cool Regimen of Barley and Oatmeal-waters, or Emulſions: He adds in the Declenſion; *ubi Acuties tamen aliqua Morbi nec-non Acrimonia inflammatoria adhuc viget; tunc ſumo Flavedinem ſubtilem Corticis Limonum in Fruſtula rejectum, eumque bullio lenitèr cum Aquâ Fontis; & hujuſmodi Aquæ citratæ* calidæ *præbeo bibendos ægro tot Cyathos quot velit, dummodo poſſit Stomachus regere: Hàc enim copioſâ Potione refræno Salium Acrimoniam, Vires reſtauro & FLUXILES REDDO HUMORES, ut in ſuis Filtris facilius citiúſque repurgentur. Hanc Potionem Aquæ citratæ frequentèr præſcribo —— ut aliquot Cyathos ejuſdem* valdè calidæ *quotidiè ſorbeant.* Hence Dr. *Keil*, in his *Book of Secretions*, obſerves, That Dilution diminiſhes the Attraction of the Salts in Rheumatiſms, and hinders their Violence in acting and producing their racking Effects, when they approach too near to each other.

Thus

Thus it is in Hectical People, where the Acrimony and Salts in the Blood are ſo copious, and approach each other ſo near, that they ravage and tear the Fibres, or at leaſt irritate 'em ſo violently, that the Blood is hurried about one third faſter than in a natural Circulation; and conſequently a vaſter Expence of Spirits are required to propel it, in a *Ratio* to the Exceſs of *Syſtole's* in this preternatural Circle to the natural one; for I think it will not be denied me, that our daily Actions are the Standard of the Expence of Spirits; ſo that their Exhauſtion bears a proportion to the Quantity of Motion; and that Motion, to the Numbers of Contractions; whoever then can know how to hinder or ſeparate the Contact of theſe Salts, hinders Irritation and all their other Effects, which we ſee neceſſarily proceed from thence: Hence Dilution, in theſe Caſes, is neceſſary in an abſolute Senſe. As to the other Correctives commonly given in theſe Caſes, I don't deſign here to account for 'em, and therefore I ſhall proceed to another Point.

Motion in an inclin'd Plain, is doubly ſlower than in a perpendicular Line. The Celerity of Motion in one inclin'd Plain, is, to the Celerity of Motion in another inclin'd Plain of the ſame Altitude in a Ratio, *reciprocal to that of their Lines:* And *a Body falling from an inclin'd Plain, the Velocity is equal, if the Deſcent be ſo.* And *an inclin'd Plain given, 'tis eaſily found how far a Body would fall in the ſame Space from a Perpendicular of the ſame Altitude.* For, as Dr. *Wallis* obſerves, *Equal Bodies gravitate in Proportion to their Declivities.* Hence the more inclin'd the Plain is, the leſs muſt be the Gravity of the deſcending Body, becauſe we ſee that *Obliquity weakens Gravity*; ſince it is certain, that *Impulſes are as the Sines of their Angles of Inci-*

dence: Hence as *Inclinations* retard Deſcents; *They* muſt, *vice verſâ*, accelerate Aſcents; becauſe if the *Inclination* diminiſhes the *Pondus*, an equal Projective Force will puſh an equal Body obliquely upward with leſs Reſiſtance and more Celerity, than if it were mov'd upward in a *Perpendicular*; in a *Ratio* to the Difference of their Angles; becauſe the Difference of the Preſſure or Motion upward Encreaſes as the Line the Body moves in, approaches nearer to a *Perpendicular*. Hence abſtracting from Reſiſtances, or allowing for 'em, theſe *Lemma's* may give us ſome Light to know the Quantity of the Circulation of the Blood in *perpendicular Lines*, or *inclin'd Plains*, by its *own* proper Weight, or by the Truſion of an Impelling Force; but the directer the Line is, the ſtronger muſt be the Protruſion; and therefore where the Fibres are made laxer than naturally, by any aqueous, oily, or ſuch ſoft and unctuous Drugs, the Fibres in proportion, turn leſs direct, and the Circulation grows ſlower in the Veſſels; and 'till the Exhalation of theſe Particles, by diſcutient or abſorbing Medicines, the Blood muſt continue to move ſlower on, and we muſt be ſubject to all the Conſequences that neceſſarily attend ſuch a Change.

Heavier Bodies thruſt lighter ones upwards: The Protruſion of Bodies leſs heavy, is ſo much the more vehement as the Diſſimilitude of their Weights; (or *the* Protrudens *and* Protruſum *are in a* Ratio *of their* Pondus.)

I ſhall only add, that hence it is that the *Mucus* of the Noſe ſwims at the Top of Water; that *Rheumatick Blood* ſwims upon the Cake; and that Bodies only gravitate with their Exceſs above the protruded Body.

There

There is no Point of a viſible Object, from whence Rays don't reach to all Parts of the Iris, *and all Parts of an Object are ſeen:* And, *Rays emerging from a Glaſs Sphere, the* Focus *of ſuch emerging Rays is at the Diſtance of three Semi-Diameters, and more.*

From this it is concluded, that Spots and ſuch-like Black Figures that ſeem to float in the Eye, are not really in the Humours, for that the *Focus* of the Repreſentation of ſuch Gnats, would, if at all, not converge but at a great Diſtance beyond the *Retina*, and therefore cannot appear at the *Retina*, and therefore are not notic'd by the Eye: Hence it is concluded, that ſuch Specks are really ſome Obſtructions in the *Retina*, whence ſome Rays of the viſible Object that are receiv'd, are not perceiv'd. *Pitcairn* advanc'd This; which however was obſerv'd before by *Galtruchius*, p. m. 269. ſpeaking from *Ariſtotle*, Thus, *Senſibile poſitum ſupra Senſum, non facit Senſationem: Quare*, ſays *Galtruchius*, *quæ ſunt in Oculo, ab ipſo Oculo non videntur—Quia ſi propiùs Objectum accedit ad Oculum Vertex Coni refracti projicitur ultra Retinam.*

In a Cone, the greateſt Reſiſtance to Motion is at its Vertex.

Hence 'tis ſuppos'd that Obſtructions moſt reaſonably happen in the evaneſcent Arteries: this was advanc'd by *Pitcairn*; which has been alſo taken Notice of by *Lindanus in Collegio ſupra Hartmannum, p.* 166. *de Meſenterij Inflammatione*, §. 2 & 3. who has theſe Words, *Obſtructio eſt metuenda ubi ex majori in minus Vas defertur:* And hence it is that Tumours generally happen at the *Terminus* of ſome of the ſmall Arteries.

If the Blood be ſo vitiated, as that the Strengths are augmented or diminiſhed, 'tis the ſame Thing, as if the Blood offended in Quantity.

Hence, if a Perſon labours under a Want of Strength, from the Blood's being vitiated by ſome preternatural Ferment; 'tis the ſame thing as if the Blood were diminiſh'd and drawn off. And again; ſuppoſe a Perſon labours under a Diſeaſe where the Strengths are much augmented, as Madneſs, and ſuch-like, from ſome Acrimony of the Blood; 'tis the ſame thing as if the Blood were augmented. So that, ſuppoſe a Perſon has in his Veſſels 20 Pounds of Blood, and the Strengths equivalate 5 Pounds; then if we conſult Sir *Iſaac Newton*'s *Law of Motion*, it will ſtand thus, $ac = m$, or 20 multiplied by 5, is equal to 100 ℔. which this Perſon can lift. If then any one falls ill of Madneſs, and can lift up 140 ℔. then the Moment of Strength in each Pound of Blood, amounts to 7 ℔. for 20 multiplied by 7, is 140: But if they labour under ſuch a Languor, as that they can only lift a Weight of 80 ℔. then 20 multiplied by 4 is equal to 80 ℔. and the Moment of their Strength is only equal to 4.

Secondly, Suppoſe the Blood were augmented to 28 ℔, and the Moment of Strength of each Pound were equal to 5 ℔; then 28 multiplied by 5 is equal to 140; ſo that 20 multiplied by 7 is 140, and 28 by 5 is 140. Hence 'tis evident, that 'tis the ſame thing, as to Strength, whether the Blood's Quantity be augmented, or its Quality vitiated. Hence it may be inferr'd, that if Madneſs be occaſioned by ſome Acrimony of the Blood, and the Strengths of that Perſon be conſiderably augmented, we may act as if the Perſon labour'd under a Plenitude, by drawing off ſuch a Quantity, as will leſſen the Strengths of the Patient to a certain Degree;

gree; and this we may the more boldly attempt becauſe 'tis agreeable to common Practice in ſuch Caſes: On the other hand, when the Strengths decay from ſome vitious Quality, it being the ſame thing as if ſo much Blood were loſt, we may give Cordial Diet and Medicines to repair the loſs of Spirits and Strength: But as for the State of Humours, on which this Decay originally depends, 'tis the Buſineſs of another Part to correct.

The Heat in our Body is in a Ratio *compounded of the Quantity of Blood, and its Celerity*, and the conſtituent Particles.

So that when we are under a Fever, and our Pulſe is encreas'd in Numbers, our Blood is obſerv'd to mount the *Thermometer* up to *Sultry*, and this depends upon the Rarefaction and Attrition of the Particles amongſt themſelves. I am not now calling it into Queſtion, whether ſome extraneous and active Particles don't give Riſe to this Velocity; for nothing is mov'd but by ſome Agent: Hence, *vice verſâ*, 'tis argued, that in the Cold Fits of an Ague, the Celerity, and conſequently the Attrition againſt the Sides of the Veſſels, are much leſſen'd; which ſome extraneous Salts occaſion, by clogging and impeding the Motion of the Blood: And here we find that the *Diſſilition of the Arteries is not reciprocal to the Reſiſtance*, (as *Bellini* ſomewhere expreſſes himſelf;) for, in this Caſe, the Pulſe grows weak and ſlow, (as *Cole* has it, *p.* 126. *de Febr. Intermitt.*) therefore the *Syſtole* bears a reciprocal Proportion to the Influx of the Animal Spirits into the *Villi* of the Heart, which, in ſuch a Condition as the whole Fluids are then under, are very ſcantily ſupply'd. This State of the Fever does not continue long, but is ſoon ſucceeded by its contrary, *Heat*; which (as the above-named *Bellini* has it) happens, ſo ſoon as the *Preſſion, and the natural Force of Fire, to exert*

itſelf conquers the Implication from the Viſcid; or, that the Particles, by a repeated Circulation, are comminuted and divided into leſs *Globuli*, where the Salts begin to extricate themſelves, and irritate the *Villi* of the whole Frame of the Heart and Arteries: And therefore to aſſiſt this Extrication the eaſier, and leſſen the Coheſion, 'tis neceſſary to follow the Caution once mention'd, in giving Liquors warm'd, to dilute, and ſtrongly to deſtroy the Attraction: The more Haſte we make in doing this, the better; for in the Cold Fits there is Danger of their never ſurviving it, where the Cauſe of this Coheſion is ſtrong and plentiful.

The different Effects of Heat upon the Fibres of our Bodies, is ſomewhat remarkable; for a *gentle* Warmth relaxes 'em, whilſt a *ſtrong* one criſpates and corrugates 'em; ſo that in any Diſeaſe, where there is a Tenſeneſs of the Fibres, (as *Baglivi* obſerves juſtly there is in Frenzies,) Fomentations of warm Emollients to the *Hypochondria* relax and help to give ſome Revulſion to the Humours from the Head; for that by ſuch a Proceedure, the relax'd Fibres give an eaſier Inlet to the circulating Fluids, by ſo much as the Reſiſtance to Motion is leſſen'd; and thus the Blood that is not impacted, runs thither with more Eaſe, and the diſtant Part is reliev'd. 'Tis upon this Principle of Relaxation, that *Sylvius C. 9. de Morbis Infantum*, adviſes the Feet to be bath'd in warm Milk, to prevent the Small-Pox's breaking out in the Face: 'Tis upon this Head too that we read in *Verheyen de Febribus*, p. 294. that Sir *Kenelm Digby* order'd a young Woman to rub one Side of the Face with Oil of Almonds and by it prevented any Marks from the Small-Pox; for that the more acuminated the Small-Pox are, the leſs they are obſerved to Mark; and the Reſiſtance to Motion, that Way, being much leſſened, the Propulſion *ad extra* bore a Proportion to the

Emol-

Emollition of the Fibres. This ſame Mechaniſm is obſervable in Critical Tumours, where the Part affected is rubb'd with *Ol. Chamæm. Lilior. Amygd. d. tum Lanâ ſuccidâ iiſdem Oleis imbutâ.* Vid. *Schmitz.* p. 139.

We ſee then how the Exceſs of Heat criſpates our Fibres, in Proportion to the Humidity exhal'd: ſo that in a violent Heat we ſee *'em* change their Texture and Direction extremely, even to become incapable of paſſing their Fluids, and at laſt of holding their Contents in their Channels; ſo that how Inflammations and Eroſions happen, is pretty well accounted for. On the other hand, a gentle Warmth is uſeful to keep the Veſſels flexile, and to cauſe 'em to yield up the ſmalleſt Impulſe made on 'em by the approaching Fluids; and thus the Circulation is continued by their *elaſtick* and *reſtitutive* Force, which is the natural Office of the Arteries, contracting themſelves after they have gently yielded to the Force impell'd on them by the Heart.

All Qualities are to each other as the Denſity of their Radij: And, *This Denſity is reciprocally, as the Diſtance from the radiating Point*; or, *as the Squares of their Radij.*

Suppoſe two Circles; whatever is within the leſs, is more intenſely heated than the Body contained on the Surface of the larger, in a *duplicate Ratio* to their *Radij*; ſo that, ſuppoſe the Surface of the leſſer Circle has its *Radius* at the Diſtance of 4 Inches from the Radiating Point or Center, and the larger has its *Radius* at the Diſtance of 6 Inches; then, I ſay, the Body on the larger is heated as 36 to 16, which here is more than double: This Principle holds good in all Qualities, as Heat, Cold, Air, Light, Sound, Smells, nay, and Motion; ſo that even the Blood may ſafely be ſaid to move on ſwifter at the Center of its Motion, the Heart, than at the Extremity of the Arteries and

Veins, where there is the utmoſt Diſtance from its Radiating Point: But this being an Affair ſo much within the Reach of Common Senſe, 'twould be an Obtruſion upon the Patience of the Reader to add more on this Head.

Effects are Aggregates or Rectangles under the Sum of their Cauſes.

Hence, if we would account for any Effects produced in our Bodies, we muſt take a perfect View *of all the Cauſes* that can produce ſuch *Phænomena:* Phyſicians ought, particularly, to be aware of too narrow Views in their Diſſertations; for if we look into ſome of the *Hypotheſes* they have ſettled, even in Practice, 'tis amazing to find ſuch Men of Senſe amuſing themſelves with Trifles, and leaving the ſerious Part of the Buſineſs either entirely out, or handling it ſo ſlightly, that it is very evident they ſtudy to raiſe a Reputation by an unintelligible Jargon; but that they have neglected the main Point, or Believe it ſufficiently advanced by other Hands.

By this Rule, whoever has a Mind to underſtand the Reaſon of Muſcular Motion, muſt take a View of what is obſervable on a Muſcle in Motion, that he may not be miſtaken in accounting for it: We obſerve then, that a Muſcle acting, *grows ſhorter*; That however *its Surface is Equal*; That *its* Æquilibrium *is deſtroy'd*; That *its Power is greater and ſwifter*; That its *Figure is chang'd*; And that *one* Terminus *is immoveable.* The Change of Figure in a Muſcle to Breadth, ſhortens it; but yet Experiments try'd by the Ingenious Dr. *Connor*, whilſt I was one of his *Hearers*, convinced me that the Surface was the ſame. We need only conſult *Geometry*, to know that a Change of Figure is no Argument of the Surface being chang'd too; ſince to adequate one *Parallelogram* to another, there is a Propoſition that *the Squares of equal Lines are equal*;

and

and ſince ocular Demonſtration has convinc'd me of this, I find no Difficulty to ſuppoſe it ſhorter, yet broader; ſince what it loſes in Length, it gains in Breadth. *That the* Æquilibrium *is deſtroy'd, is evident*; for whilſt one Muſcle has no greater Addition of Force than another, the Muſcle and its Antagoniſt are both at Reſt. From this Principle, that *Bodies plac'd at equal Angles from the Center, if theſe Bodies are equal, there is no Motion; but if you join any Weight to one of them, the ſtronger preſently makes an acute Angle with the Perpendicular, and moves,* and the *Æquilibrium* is deſtroy'd. *The Power is greater and ſwifter*, in Proportion to the Diſtance of the *Termini*; for all Motion is varied in a Proportion of the *Periphery* or *Radius* to the Center: So that a Muſcle doubly longer, will move a Weight as the Lengths ſquar'd. Hence a Muſcle 4 Inches long will move 16 Pounds, when a Muſcle of 2 Inches long, only moves a Weight of 4 Pounds, if there be no other Cauſe that diſcriminates the Motion. *The Figure is chang'd*, for there would be no Motion without this Mechaniſm; I have obſerv'd above, that *the Angles being equal, the Sides are alſo equal*; but if the Sides ſhou'd continue unchang'd, they would be at Reſt. *One End of the Muſcle muſt be at Reſt and fix'd*; *for whatever is mov'd is mov'd upon ſome Body at Reſt:* Hence the old Maxim of *Archimedes*, *Give me ſomething to fix my Feet on, and I will move the Earth*; Δὸς ποῦ στῶ, καὶ τὴν γῆν κινήσω. But whether this Motion is perform'd by a Contraction of the *Venters* to each Head, or by a *Pondus* drawing one Part upward, and another *Pondus* drawing the other Part downward, or by the *Liquidum Nervorum* entring and rarifying, and occaſioning a contrary *Niſus*, and ſo enlarging the *Area's* of the Fibres of this *Rhombus*, or whether by a bare Contraction, I ſhall not now determine, leaving it to each Perſon to frame what Notion he pleaſes in this Matter.

One

One thing cannot here be paſs'd by in Silence: Dr. *Cheyne* having, in his *Theory of Fevers*, advanced, That the Flegm of the Stomach can be no *Fomes* to encreaſe the Fevers; becauſe to enter the *Lacteals*, it ought to be much more attenuated than it is, and that a Sphere with a larger Diameter than the Orifice it is to paſs through cannot enter; hence another Gentleman concludes, That *Balſamicks* cannot be uſeful in Conſumptions, for that the Diameters of the Orifices of the *Lacteals* are too little to paſs them: But whoever reflects on the vaſt Fermentation there is in the Stomach, may gueſs how much any thing taken in at the Mouth, may be comminuted and divided by the inteſtine Motion between the *Heterogeneous* Particles of Bodies, which we may grant here, if no where elſe: But if, according to Monſieur *Chirac*, we compute the Compreſſion of the Muſcles of the *Abdomen* and *Diaphragm*, and that of the Stomach it ſelf to be equivalent to 260000 ℔; how eaſy is it to imagin the vaſt *Comminution* Bodies, taken down, muſt bear, and how much they muſt be attenuated, and how eaſily paſs the *Lacteals*? Though I cannot believe that the Muſcles have this whole Force he aſcribes: If indeed they acted with a parallel Direction, ſomewhat might be ſaid; but the Obliquity of this Direction muſt make this a doubtful *Hypotheſis*, as ſome have demonſtrated.

Secreted Liquors in our Body differ in Degrees, of Cohesions, Fluidity and Quantity; and conſequently in its Aggregate of Motion.

Hence, all Liquors can be ſeparated through every Gland, if the Size of the Gland be but alter'd. Hence in *Icterical* People, where the *Ductus Choledochus* is obſtructed, the Bile is ſeen to paſs through the Kidneys, and appears in the Urine, as alſo in the Skin. The Laxity then of a Gland, putting a

Re-

Remora to Motion, will make the Fluid ſtop there, e're it can be ſecreted; hence that Humour ſecerned will be leſs Fluid; hence *Opiates*, by relaxing, make the Blood viſcid; or the more complicated a Gland is, the more viſcid is the Juice ſecreted; for that ſo many *Plicæ* are ſo many Reſiſtances to Motion; and the leſs Quantity of Fluids there are, the ſlower is the Motion; but the more viſcid its ſecreted Fluid is, the more is the Quantity, (for that the Blood circulates in the leſs complicated Arteries, finding there the leſs Reſiſtance) the *Secreta*, from thence, are the more fluid; hence alſo the *Celerity*, *Cæteris paribus*, augments the fluid Secretions; but *the ſlow Motion*, the viſcid ones. In ſhort, the *Quantity*, the *Celerity*, and the *Largeneſs of the Orifices*, *Cæteris paribus*, augment the Secretion of the more fluid *Secreta*; but *the Want of Blood*, *the Slowneſs of its Motion*, *and Laxity of the Fibres*, occaſion all the *Secreta* to be more viſcid. When therefore there is a depreſſed State of Blood, and the Motion is ſlow, we are obliged, in order to forward the Secretions, as well as change them, to adminiſter all the *volatile* or *ponderous* Medicines to amend this Fault; and, on the other hand, where the State is too exalted and the Secretions too fluid, we impede its Motion, and incraſſate the *Secreta* by all the *acid*, *watry*, and *cooling* Drugs uſed on ſuch Heads. As to the Quantity of the *Secreta*, it has hitherto been throughly believed that *Sanctorius* gave us an exact Detail of what Quantity of *Perſpirabile* as well as ſenſible Evacuations were thrown off in a Day, till Dr. *Floyer* found the contrary in our Clime, by Experiments made for that End; ſo that inſtead of 50 ℥ (or 6 ℔.) in 12 Hours, 'tis evident we only perſpire about 7 or 8 Ounces, *&c.* at moſt in that Time, which is nearly equal (in the firſt Suppoſition) to what is exhal'd from an equal Surface of the Sea in our Clime in that Space.

Space. As to the Meaſure of the *Perſpirabile* from the Surface of the Lungs in the ſame Time, I found it by a peculiar Contrivance, (I may have Leiſure to mention ſomewhere,) to be ℥iiij. ℈j. in our Clime. The Propulſion of the Blood through the Lungs (they being ſo near the Center of Motion), and the Varieties of the Air's Preſſure being ſo immediately communicated to the *Bronchiæ*, as well as the Coldneſs of it, having ſo immediate an Influence over its *Secreta*, and the Part being ſo momentous to Life; I am ſo far from being ſurpris'd at their Diſtempers, that I am amaz'd we ſhou'd not always ſuck in Death at this Port.

A Fluid of equal Velocity with another, but of a greater Gravity, gives a greater Ictus *than one with an equal Velocity and leſs Gravity.*

Thus we ſee that, in Percutient Bodies, the greater the *Pondus* is, the greater is the Moment; ſo that the *Ictus* is not from the *Moles* alone, but the *ſpecifick Gravity* alſo: Hence if the Queſtion turns upon *Aperients*, I look upon *Volatiles*, and *Mercurials* join'd, to be the moſt potent; for here you combine a ponderous Drug to one of a nimble Diſpoſition; the two Requiſites to make a ſtrong Effort on the Fluids and the Solids too.

In Cones, the Reſiſtance is leaſt in their Axis: Newton Prop. 35. L. 2. Schol.

Hence 'tis concluded that the Motion of Fluids through Cylinders and Cones finds more Reſiſtance at the Sides of the Veſſels than in the Middle; this is evident in the Channel of a River; hence the Blood is concluded to move faſter in the Middle of the Arteries, than at their Sides: So that it is hence ſaid, that the more viſcid Parts are at the Sides of the Arteries; for that the Motion being ſlower there, and the Parts being more at Reſt,

Reſt, the Fluids have more Leiſure to cohere, and to become more viſcid; the Viſcidity being in a Reciprocal *Ratio* to the Celerity; the leſs Celerity the Fluids move on with, the more viſcid muſt they be.

Stimuli *move the Solids and Fluids; contract and expreſs the Fluids, and exagitate the whole Maſs: They are perform'd by occaſioning a mutual Action on the Solids and Fluids.*

Whatever irritates, ſtimulates: Bliſters are a notable Example of *Stimulation.* Where the Solids are put into frequenter Oſcillations, the Fluids are hurried about by them with a greater Confuſion; becauſe in theſe we find very ſenſible Arguments to convince us that they enter the Blood, when we are oblig'd to have Recourſe to Emulſions, and even *Opiates* or *Camphorates* to allay the *Dyſuries* they raiſe. Is it then reaſonable in *intenſe Fevers* to apply 'em? Is it good Practice in *Phrenzies?* Are they indicated in the *Vigour of Inflammations?* And yet how frequently do we meet with this Malpractice? But, *Populus vult decipi, decipiatur.*

Circles only touch in a Point; and a Sphere is touched by 12 *equal Spheres in* 12 *Points only.*

Whenever then a Body is ſpherical, and there is a *Congeries* of ſuch Bodies, they touch each other in few Points; ſo that their Coheſion muſt be ſmall: and conſequently ſuch Bodies will eaſily aſcend by a ſmall Impulſe of the Fire. Hence 'tis agreed on, that Mercury being ſpherical, (or, as *Gulielmini, Trattato di Fiumi,* ſays, ſpheroidal,) it more eaſily aſcends in Sublimation than ſome Bodies much lighter. Yet Doctor *Friend* obſerves very well, that if you mix Lead with Mercury, it aſcends the eaſier; for that the Gravity by that Mixture

Mixture being diminiſh'd, the Surface is enlarged; and large Surfaces yield beſt to the Impulſe. However, 'tis not difficult to adequate *Gravity* and *Surface.*

All Impulſes act with their Exceſs of Power only, above their Reſiſtances. Et vice versâ.

Hence let us ſuppoſe that any Agent acts with a Degree of Impulſe equal to 6, and that the Reſiſtance is equal to 4, then the Moment of Impulſe is equal to 2, its Exceſs of Power. We may then conclude, that the greater Exceſs there is of Moment, it removes the Reſiſtance the eaſier. Hence is it that Ruptures of the Blood-Veſſels often happen from the too great Load of Blood, or the *Plethora ad Vaſa*; and by a contrary Reaſon, it often happens that the Pulſe intermits; becauſe, as in the Caſe of Fat on the Auricle of the Heart, the Reſiſtance is greater than can be conquer'd in one Pulſation by the Moment of the Influx of the Spirits. The ſame is ſaid of any *Pondus* that hinders the Elevation of the Heart: But when ſuch a Quantity of Spirits are in the *Villi* of the Heart, as are more than a Counter-balance to this Reſiſtance, then it re-circulates its reſting Fluids.

Animal-Bodies are Porous: (ἔμπνοον καὶ ἔκπνοον ὅλον τὸ σῶμα.)

Whoever conſults Mr. *Boyle* on the *Poroſity of Bodies*, will find that ſolid Bodies, and ſuch as are conſiderably denſer than any *Species* of Solid in humane Bodies, admit of *Menſtrua* to penetrate them, ſuch as *Glaſs*, *Gold*, *Copper*, *Crucibles*, *Sand*, &c. And therefore we can be at no Loſs to conceive that the Pores, even of Bones, can imbibe *Humidities*, *Humours*, and even *Mercury*, if Authors obſerve juſtly. Hence in the Unction we find the Mercury as eaſily enter as *Spirit* of *Wine*; and therefore we may conclude the whole, with *Hippocrates*,

crates, that our Bodies have inſpiratory Paſſages as well as expiratory ones, or it would be hard to imagine how Gold ſhould turn white, when held in the Mouths of Perſons under a Salivation, and that raiſed by the Unction; (which I mention, to prevent any objecting that the Mercurials given inwardly ſtick ſomewhere about the Jaws) but that the *Gold* attracts the *Mercury* lodged in the Blood.

Diſſolvents are ſuch, becauſe of a Congruity of Pores, &c.

Hence, *Reſins* are beſt diſſolv'd in *ſulphureous* Bodies; *Salts* and *Mucilages* in Water; and *Metals* in *Saline* Bodies: But as Experience teaches us to know this, give me Leave to mention ſome few, out of many more behind; *Turpentine*, *G. Hederæ*, *Galbanum*, *Myrrh*, *Reſin* of *Jalap*, *Balſam* of *Peru*, *Balm* of *Gilead*, and ſome diſtill'd *Oils*, are diſſoluble in the *Yolk* of an *Egg*; *Alkaheſt Glauberi* diſſolves *Ungula Alcis* ſpecifically; *Oil* of *Anniſeeds*, *Coral*; *Spirit* of *Nitre*, *Butter* of *Antimony*; *Spirit* of *Wine*, *Mercury ſublimate*, all *Oils*, and *Scammony*; *Antimony* acts on *Gold*; *Sal. Tartar*, on *Sulphur*; *Spirit* of *Nitre*, on *Biſmuth*; *Sulphur*, on *Steel*; *Lead* is wrought on, by *Orpiment*, into *Shot*; *Spirit* of *Wine*, *with Sal. Tartar*, diſſolves *Oils*; *Salt Armoniack* acts on *Braſs*; *Salts* melt better in Cellars, than at the Houſe-top; *Camphire* corrects *Cantharides*; *Salt*, or *Acids*, *Antimony*; *Mercury ſublimate* is diſſoluble in *Water*. And *Konig Regn. Mineral.* ſays the ſame of *Arſenick*, which is beſt corrected by *Salt* of *Tartar*; *Hellebore* by *Quinces*, ſays *Antonius Ludovicus*. Hence, whenever any extraneous Ferment is in the Stomach, or the Veſſels, whoever affects to cure well, muſt make himſelf Maſter of the ſeveral ſpecifical *Diſſolvents*, as well as make the ſtricteſt Enquiry into the Symptoms produced by them, that he may be able to diſtinguiſh how he is to proceed.

Salts

Salts alter according to the different Managements of Them.

Calcination makes *Salts lixivial*; *Diſtillation* gives us *acid Salts*; *Putrefaction and Diſtillation* afford us *volatile* ones; *Coction* gives *nitrous*, *armoniacal*, *ſaline*, or *tartareous* ones. Now we may hence conclude, that Coction being the only Operation neareſt to that perform'd in the Blood, or rather a Branch of Coction, I mean *Digeſtion*; we can have no other Salts ſave theſe four laſt variouſly alter'd in their Texture. However, that other Salts are materially pre-exiſtent in it; becauſe the ſeveral Sorts of Salts mentioned can be rack'd from it by the Fire; the Acid *Spirit* of *Ants* got by Diſtillation, changes *Blue Flowers* into a *Red*, (as does *Spirit* of *Sulphur*;) and (like *Spirit* of *Æs Viride*) corrodes *Lead* or *Iron*, as I remember to have read ſomewhere in the *Philoſophical Tranſactions*. Thus when we are aſſur'd, by the common Diagnoſticks, that Salts affect the Blood, we muſt uſe proper and ſpecifical Corrigents to one of theſe; the *tartareous* and *nitrous* give riſe to the cold States of Blood; but the great *Acrimony* of the *Salt* (whether by our Diet or Medicine, or otherwiſe) occaſions the exalted States: However, this being a Subject too copious for my preſent Purpoſe, I ſhall leave it to ſome more curious Enquirer, or 'till my Leiſure will allow me farther Trials. I am apt to believe that our Lameneſs, in the Knowledge of the particular Natures of *Salts*, has hitherto made Phyſicians look upon *Elephantiaſes* to be incurable: Some of which, however, are not ſo, to ſuch as know the true Method of ſpecificating the Antidote.

Colours are produc'd mechanically, as are Odours, Taſtes, &c.

Colours are ſaid to depend on their Salts: And to know the ſeveral Changes produc'd, we muſt be

be ſuppoſed to have ſome tolerable Skill in the Tinctorial Art; which at preſent I ſhall ſupply, in an Inſtance or two, from the induſtrious Mr. *Boyle*: *Salt-petre* and *Salt* colour Neat's-Tongues, red; *Salt* of *Tartar* boil'd in Milk, makes it grow red; which many look upon to be the Caſe in turning *Chyle* into Blood. A *ſulphureous Spirit* of Benjamin mix'd with *Sal Armon.* turns alſo red, which illuſtrates Sanguification. But whoever would be knowing in theſe Matters, let them conſult Mr. *Boyle*, &c.

Having ſaid enough to convince any thinking Perſon how far this Manner of Reaſoning is uſeful (if not abus'd) to Mankind; I have a Mind to annex ſome few Trials made on humane Blood, and ſome of the *Secreta*, which I have taken the Pains to collect for ſuch whoſe Leiſure allows them not to make ſo ſtrict a Scrutiny; which at once will help our Knowledge in the Nature of the Blood, and give them ſome Inſight into the Nature of Medicines.

Serum coagulates, on dropping into it *Sublimate Water*; by *Sp. Salt*, *Oil* of *Vitriol*, *Sp.* of *Wine*, and *Oil* of *Tartar*, *per deliq*; (ſo does Milk) by the Heat of Fire, by *Allum*, by ſeveral *Tinctures* made of *Spirit* of *Wine*, and with *Tinctures* of *Steel* made with *Acids*.

It remains fluid with *Spirit* of *Salt Armoniack*, with *Volatile Salts* and *Spirits*, and moſt *Tinctures* made with *Acrimonious* Plants, and with *Tinctures* of *Steel* (with *Tartar*.)

Blood coagulates with *Oil* of *Vitriol*, with *Acids*, with *Allum*, with *Spirit* of *Wine*, *Cinnamon-Water*, diſtill'd *Vinegar*. And though it coagulates by it ſelf when let out, yet it congeals ſooner with the following; by *Extract* of *Gall*, *Juices* of *Hemlock*,

Alchymilla, *Biſtort*; by *Lixivial Salts* of *Tamariſc*, *Roſemary*, *Pulegium*, and of *Thime*. But theſe latter I doubt of.

It remains fluid, with *Sp. C. C. Ol. Tartar. Sp. Sal. Armon. Sal. Abſinth. Cort. Peruvian. Pulv.* or *Tincture*; with *Juices* of *Lavender*, *Sage*, Thea (made) *Wormwood*, *Bawm*, *Succory*. *Tanſy*; with *Lixivial Salts* of *Eruca*, *Artimiſia*, *Shepherd's Purſe*.

Saliva drops a Sediment with *Lixivial Salts*.

Chyle and Lympha coagulate with *Spir. Vini*, *Vitriol*, with Heat, with the Air; with *Oil* of *Vitriol*.

Chyle and Lympha remain fluid, with Motion, with *volatile* and *fix'd Salts*.

Bile coagulates with *Sp. Vin. rectific. Oil* of *Tartar. per deliq.* Crude *Allum*, *Tincture* of *Cantharides*, *Cinnamon Water*, *Sp. Nitri*, *Sp. Vitriol*, *Aqua fortis*, *Vinegar*, *White-wine*, Fair *Water*; *Sp. C. C. Sp. Salis*, and with *Oil* of *Tartar. Nitrat.*

Bile remains fluid, with *Sea-Salt*, *Vitriolum Martis*, *Salt Armoniack*, and *Sal. Abſinth.*

Altho' I allow that this Manner of Reaſoning is Polite, and am of an Opinion that the Theory of Phyſick is much advanc'd by it; I am, however, far from encouraging ſuch refin'd Reaſoning, where I find it contradicts Experience; for as Phyſick is founded on this *Baſis* primarily, we ought to ſquare our Reaſoning to Facts, and never to deny *Them*, becauſe we cannot adapt 'em to our Reaſoning. I ſhall annex an Example or two, to illuſtrate my Meaning, and then ſhall proceed to the true *Baſis*, to-wit, Facts and Experience.

There is one Gentleman, who was however otherwiſe

wiſe very Deſerving, that has reaſon'd too much *à Priore* in his *C.* 3. *of a Conſumption:* His Argument ſtands thus from *Data* in his Propoſitions; From any Suppreſſion, ariſes a *Plethora*; from a Plenitude, ariſes a *Relaxation of the Fibres*; from a Relaxation of the Fibres, ariſes a ſlow Motion of the Blood; from a ſlow Motion of the Fluids, ariſes a mucous and viſcid State of Blood; from this Viſcidity, ariſes a Paucity of Spirits; from this Penury, ariſes an Incapacity of Dilatation of the *Thorax*, (and a Want of ſufficient Air to compreſs;) from this Ineptitude to Dilatation, ariſes a Stagnation; from a Stagnation, ariſes an Inflammation; laſtly, from an Inflammation, ariſes an Ulcer, or a confirm'd Conſumption. And he draws his Indications from this manner of Reaſoning, thus; Hence, ſays he, the *Humours muſt be render'd more fluid*, the *Fibres made tenſer*, and the *Phlegm evacuated*; ſo that we muſt attenuate, contract, and evacuate. As for *Balſamicks*, he looks upon them as uſeleſs; only they are *Stomachicks*, if mix'd with Salts. Let us conſult ſome Authorities upon ſo nice a Point; and then I ſhall reaſon from *Experience* in a very different Manner. *Barbette* uſes in a Conſumption *Opiates*, *Spirit* of *Salt*, and *cooling* Things, and adviſes to forbear *Purgatives:* And *Dekkers*, upon him, adds *Pectoral Decoctions* and *Decoctions of Colewort*, with *Sugar* of *Roſes*. *Sylvius* adviſes *Gum-Arabick*, *Roots* of *Althæa*, *Liquorice*, *Comfrey*, *Leaves* of *Althæa*, *Mallows*, &c. the *four Cold Seeds*, *Quince-Seeds*, *Almonds*, *Barley*, *Opium*, *Juice* of *Liquorice*, all *fat Earths*, and ſuch like. *Etmuller* gives *Milk*, *Spaw-Waters*, *Opiates*, &c. *Morton* preſcribes *Milk*, *Spaw-Waters*, *Opiates*, *ſmooth Pectorals*, and *thin Diet*, as alſo *oleous* and *mucilaginous* Medicines. *Sennertus* adviſes *Humectants* and *Refrigerants*, ſuch as check the febrile Temper, alſo *ſmooth* Medicines, *Butter unſalted*, *Milk*, and ſuch like. *Nicholas Piſo* adviſes *Snails*,

and *Snail-water*, *Milk* eſpecially, with *ſmooth* and *mucilaginous* Medicines. *Hieronymus Cardanus* praiſes *Oil of Vitriol* in *Water* of *Maiden-hair*. *Lucas Tozzi* commends *Storax* and *Cynogloſs Pills*. *Borellus* praiſes *Butter* of *Woman's Milk*, as a Secret. *Valeſcus de Tarenta* commends *Pulvis Haly*. *Rhaſis*, *Aſſes Milk*. *Platerus* adviſes *Sugar* of *Roſes*; ſo does *Valeriola*. *Riverius* preſcribes *Milk* as the beſt Remedy, and ſuch as will anſwer all Intentions; as alſo Medicines that repreſs the Hectick, to-wit, Coolers, *&c* *Willis* adviſes *Flowers* of the *great Daiſie*, *Snails*, *Liquorice*, *Milk*, *Shavings of Ivory*, *Hartſhorn* and *China* in *Decoctions*. *Mayern* ſays the Acrimony of the Humours is to be obtunded, the Febrile Heat is to be temper'd, and *Milk* is to be uſed. *Cheſneau* adviſes a *Decoction* of *China*, *Lungwort*, and *Milk*. *Horſtius* corrects the *Acrimony*, and uſes *Opiates*.

I have taken the Pains to bring ſuch a Crowd of Authorities, to the End that Practice and Notion might co-incide; becauſe whoever would be a juſt Practitioner, muſt go backwards in his Reaſoning: And therefore ſince I find, by ſuch good and grave Men, Conſumptions treated in a very contrary Manner, 'tis my Part to ſubmit to their Judgments, where I have not ſufficiently experienc'd the contrary: Let us then ſee how, upon ſo ſolid a *Baſis* as the Experience of Ancient and Modern Learning, we can draw a different Concluſion from this Theoretical Gentleman. I ſay then, that any Suppreſſion may occaſion a *Plethora*; that a Plenitude makes the *Poſitions of the Veſſels* to be more direct; from this Tenſion and directer Poſition, ariſes a ſwifter Motion of the Blood; from the Motion encreas'd, ariſes a Fluidity and Tenuity of the Blood and Juices; from this Fluidity, ariſes a larger Secretion of Spirits; from the Quantity of the Spirits, ariſe irregular Excurſions of 'em into particular Parts;

Parts; from this, ariſes a Criſpation of the Fibres; from this, ariſes an Inflexibility of the *Thorax*; from the ſmall Motion of the *Thorax*, ariſes a Stagnation; from the Impediment put to the Motion of the Blood, an Obſtruction of the evaneſcent Arteries; from an Obſtruction there, ariſes an Inflammation; and laſtly, from this, ariſes an Abſceſs, and an Ulcer of the Lungs: So that *Evacuation* is requir'd; after which *Relaxants*, *Incraſſants*, and ſuch as clog the Hurry of the Motion; faſting from too *ſpirituous* a Diet; *Opiates*, *oleous* and *mucilaginous* Medicines, gentle *Aperients* of the Cooler kind, *Bleeding* and *Balſamicks*, are all the Requiſites in a Conſumption; which, whoever has either read or practis'd, muſt be too ſufficiently appriz'd of, to need any farther ſaid on this Point.

Mention ſhall here be made of an Inference made by Dr. *Pitcairn*, in his *Oration to the Univerſity*; after having made uſe of Arguments to ſhew us, that Objects in the Eye could not be obſerv'd on the *Retina*, he proceeds, and tells us, that ſince it was evident to a Demonſtration, that thoſe Bodies that appear'd before our Eyes had not their Abode where it was commonly ſuppos'd, then it could not be agreeable to right Reaſon to apply *Collyria* to diſſipate what had no Being, and concludes them uſeleſs. This, I conceive, (with Deference to the *Manes* of ſo great a Man) was a Concluſion too haſtily drawn; for let us ſuppoſe that theſe Specks are ſo many Impediments to the Reception of the Viſual Rays, and that they are a Conſequence of ſome Fibrils of the *Retina*, being bung'd up and obſtructed by ſome Viſcidity, or external Compreſſion: Is it not certain that the Coats of the Eye, are the Expanſions of the *Dura* and *Pia Mater*, and that the *Retina* is the Medullar Part of the Brain? Is it not daily and good Practice to order external Stimulants to Palſied

Nerves in other Parts of the Body? Is it not certain (at leaſt *ex conceſſis*) that theſe are ſo many partial Palſies of the *Retina*; as there appear Specks? Is it not certain that a total Palſie of the *Retina* is a *Gutta Serena*? Is it not certain that the nearer we approach to the Part affected, the better Effects will the Medicines produce? We may then, I think, ſafely conclude, that *Collyria* well adapted are ſo far from being uſeleſs, that they are neceſſary to ſtimulate the Coats of the Eye affected, in order to occaſion a brisker Oſcillation in the Fibres of the Part, and ſo to aſſiſt the ſhaking off of the Obſtruction; and conſequently when this is done, the Specks will appear no more.

A Critick is an unwelcome Gueſt; and if my Deſign had been to find fault out of an Itch of Satyriſm only, I ſhould deſerve Returns made me: but the Good of Mankind being my ſole Aim; and the Treatiſes mentioned being Works produced by the Labour of Men of Value and Reputation in their Profeſſions; I conſider that ſuch great Examples may miſlead the reſt of the inferior World into miſerable and wretched Miſ-managements: becauſe tho' the Inventors of ſuch Reaſonings can (by their Sagacity) in Practice correct their own Miſtakes *pro Re Natâ*; yet ſuch as truſt to their Demonſtrations, cannot.

From what is ſaid, I would adviſe all Practitioners to avoid begging the Queſtion, and affirming any thing contrary to known Experience: I would have 'em proceed with Reaſon, back'd by Experience, the only Props a Phyſician can rely on.

SECT.

SECT. III.

Whence Indications are drawn.

I Hinted above, that nothing could Indicate, but what was ſomewhere fix'd in or on our Bodies; for that External Procatarctick Cauſes did not always act on us as they might; and that however if they did, they did not always produce ſuch Effects in us, as Conjecture had dictated; and that therefore, to know what Effects they did produce, we were obliged to have recourſe to Obſervations taken from the deprav'd Functions of our Organs, the Preternatural Change in the Qualities of our Fluids and Solids, and the Retentions and Evacuations of our Fluids. I would not have Phyſicians terrify'd from an Enquiry into theſe permanent Effects; for that Mr *Boyle* has affirm'd, that the Cauſes of Diſeaſes are not yet aſſign'd, *Philoſ. Experimental.* On the contrary, with the Leave of ſo great a Man, I don't find but that they are; and whoever conſiders what I am about to advance, will be ſenſible they already are: However, the Diagnoſticks of ſuch *Effects* are not thoroughly aſcertain'd, nor ever will. You will pardon my confounding the Words *Effects* and *Cauſes*; but I ſay, with *Mercurialis de Morbis Pueror. l.* 1. *p. m.* 13. *Morbus dupliciter ſpectatur*; *Morbus ut Cauſa, ſuos habet Effectus*; *ut Effectus, ſuas habet Cauſas.*

I ſhall begin with *Plenitudes*; and I take them in an extenſive Senſe, not as a Plenitude *ad Vaſa* and *ad Vires* only; but where-ever there is any particular Repletion, any Stagnation, any Compreſſion of and from Humours, I look upon them all to require the ſame Mechaniſm in their Cure; becauſe, *Quod Plenum eſt, evacuari debet. Galen. l.* 1. *Aphor. Comment.* 22. *Martin. Wendelinus, l.* 3. *Axiom Medic. Axiomat.* 780. So that where-ever a Part or

the Whole is loaden with a Quantity of Fluids we muſt there evacuate. This holds true in external Caſes, as well as internal; for in Gangreens, where the Part is diſtended by Humours, and there is an Impoſſibility to re-circulate the ſtagnating Blood, we muſt Scarify, to evacuate the Plenitude; which being taken off, the Remainder, in the Part beyond and below the inflam'd Member, begins to obey the Motion of the propelling *Impetus*; and (if no great Alteration is produc'd in the Part) 'tis after this Method eaſily amended. So if we diſcover the Head to be overloaden with Humours, as is commonly evident, when 'tis καρηβαρικὸν, καταῤῥιακὸν, and κωματῶδες, according to *Hollerius* and *Duretus*; we are then to conſider whether thisRepletion be from a pure or an impure *Plethora*, and we muſt accordingly ſuit our Evacuations. We muſt then ſay, that there are two Sorts of Evacuations, to-wit, Inſtrumental and Medicinal: To the firſt are referr'd the *Paracenteſis* or Apertion, in any Senſe: To the latter, all the *Stimuli*, which not only have an Effect on the Stomach and Inteſtines, but alſo on the Veſſels and ſecretory Ducts; ſo that the Shock and *Irritation* give an Uneaſineſs to the Glands, and ſqueeze 'em, by their acrimonious Parts, to Evacuations; as does the *accidental Shock* given to ſeveral of the *Viſcera*, when, for Example, an *Emetick* taken, opens Obſtructions in the Gall-Bladder, and ſhakes off the Load of Phlegm from the *Bronchiæ* in *Aſthma's*: To this Head is referr'd *Riding* in *Aſthmatick Conſumptions*; for, to ſpeak the Truth, Dr. *Sydenham* can mean no Other, when he adviſes *Riding* in ſuch as are even much ſpent. My Bounds will not allow me to expatiate farther on this Head at preſent.

An Atrophy is an *Oppoſite* to Plenitudes; and I would be underſtood to take this in as large a Senſe as I have done *That* in the former Paragraph; ſo that

that where-ever there is any Defect of Juices in General or in Particular, the Buſineſs of a Phyſician is, to apply ſome amicable Specificks, in order to reſtore the Want; where no Evacuations can take Place, but only ſuch Alterations as are of the ſame Nature with the Juice or Fluid to be ſupply'd. So that here we are ſuppos'd to be Maſters of the Nature of ſuch Juices, or we can never act the Part of a Phyſician, in amending we know not what. I would not, however, be underſtood to ask an Impoſſibility of any Agent; and therefore ſince there are ſeveral of the Fluids in Humane Bodies, whoſe Natures we are very unſenſible of, *à priori*; becauſe they fall not under the common Method of Experiment, ſuch the Spirits are; yet 'tis enough for a Practitioner to know the Nature of 'em, *à poſteriori*; and ſince we find them recruited by certain nimble Agents, we are, however, look'd upon to be ſufficiently appriz'd of the Nature of *Them*, when we adminiſter ſuch as Experience has found out, by a patient Series of Trials to ſupply 'em; ſo that when they are wanting, we give all the Cordial Medicines, ſuch are *volatile Spirits*, *Aromaticks*, and *volatile Oils*, which are given in ſuch Quantities as may ſupply, but not add any Exotick Quality that may contraſt with another Contra-indicating Cauſe: Thus the *Semen* is ſupply'd with ſuch *Particles* as anſwer its double Nature of *Mucilage* and *Acrimony*; hence we give *Oyſters*, *Pepper* and *Milk*, *Spaniſh Wines* and *Yolks of Eggs*, *Chocolate*, and ſuch-like Drugs. The *Defect of Ferment in the Stomach*, is ſupply'd with *Mucilages* and *Acids* join'd; ſuch are *Elixir* of *Vitriol*, warm *Jelly*, and ſuch-like. As to *Old Age*, whoever fall under a Decay of Spirits, are properly Old; and therefore that mighty *Ens Meliſſæ* of Mr. *Le Febure*'s can be no otherwiſe ſerviceable, than that it is a great Reſtorative of the Spirits; which, however, I leave to every Man to

judge

judge whether it will do the Feats they pretend. The Difficulty of ſupplying the deficient Fluids is not ſo great a Secret as is the Diſcovery of ſuch Defects; which, if Time allows me, I ſhall endeavour to illuſtrate, in a proper Seaſon.

The Blood is often ſtock'd with Exotick Qualities, which conſtitute the different States of Blood, and which Juſtice has been done to, by the Ingenious and Laborious Dr. *Floyer*: *In the depreſs'd States of Blood*, where our Heat is below the Standard, if there is a *Lentor*, all the *Bitters*, *Aromaticks*, *fixt* and *volatile Salts* are indicated, *Chalybeates* are good, *Mercurials* are here proper too; and Riding is profitable. I here would Remark one Thing, becauſe I have often found Practitioners in ſome Miſtake about it. When Pains ſeize a Patient and wander about the Body, but yet have no Heat along with them, but what is Natural, or where the *Pains* are not plainly Convulſive, I have ſeen diſmal Conſequences from Bleeding frequently in this Caſe; for that Dropſies enſu'd upon it, and they have only chang'd a leſs Diſorder into a much greater. If theſe Gentlemen would but give themſelves the Leiſure to reflect, that the Blood being ſluggiſh, and reſting at the Capillaries, gives riſe to theſe Pains; they would then judge, that *volatile* Medicines would cure the Patient very eaſily, and ſave them their Reputation.

If the Blood is Sour, by Diet, Medicines, or the Retention of any Humour which ought to have been thrown out of the Body; we muſt give the *Alcalines* of all Sorts, whether *teſtaceous*, *fix'd* or *volatiles*, *Chalybeates*, and whatever will rob the Blood of this obſtinate Gueſt, which generally attends Hypochondriack Perſons. 'Tis yet an eaſier Task to the Undertaker, when the External Cauſes have ſour'd the Maſs and Spirits, than when the Paſſions of the Mind have deprav'd them; becauſe it is eaſier

ſier to deny them what is hurtful for them, and forbear to give them ſuch Fare, than to bridle an irregular Paſſion, which attacks them unſeen and when alone; and it would not be eaſy to conceive how an inviſible Form ſhould ſo diſturb Matter, if it did not occur in daily Practice.

When our Blood is too Serous and Fluid, all *Abſorbents* of the *Teſtaceous* Kind are uſeful, *Ceruſs* of *Antimony*, *Diophoreticks* and *Diureticks*, *Bitters*, *Petaſitis*, *Guaiacum*, *Saſſafras*, *Juniper-Wood*, *Muſtard-Seed*, *Horſe-Radiſh*, *Pulv. Æthiop.* and ſuch-like, are proper to correct the too Watriſh and Lax States of Blood, and carry them off by the Pores of the Skin or Kidneys.

Wind is the produce of all vitiated States, it is carried off by the moſt powerful Inciders, ſuch as *volatile* and *oily Salts*, *Aromaticks* in Powders, *Infuſions*, *Waters*, and *Oils*, *Ginger* or *Caſtor* in *Wine*. If the Wind is rais'd from an *Acid* State of Blood, the State from whence it is produc'd being hard to get rid of, the Wind, ariſing from the Fermentation of that Humour in the Stomach, is alſo difficult to cure. I remember a Lady of Note, who, for a conſiderable time, had been troubled with a Swelling or rather a Fulneſs at her Stomach, which ſhe could not be cur'd of by her Phyſician in Ordinary; upon Application to me, I did believe it was Wind, and proceeded in ſuch a Method, for ſix Weeks, as I judg'd might have been effectual; but to my Surprize, at the Expiration of that Space ſhe was as full of Complaints as at firſt: By the Obſtinacy of the Diſeaſe, I had juſt Reaſon to ſuſpect that this was an *Acid Wind*, if I may ſo term it, and therefore I gave her *Antimonium Diaphoreticum* in Juleps, which in a Fortnight's Time perfectly reliev'd her, and ſhe return'd very well ſatisfy'd.

I muſt

I muſt here remark once for all, *That all Saline States, whether acid, nitrous ſalino-ſulphureous, (fix'd or volatile) or any Species whatever of Acid ones, are cur'd, as* Bohnius *obſerves, by Terreous, Teſtaceous, Gritty, and Martial Drugs, alcaliz'd Salts whether urinous or fix'd, by Aromaticks and Bitters; but any Species of Salines, by oily, watry, mucilaginous and gelatinous Medicines*: So that if we are ignorant of the *peculiar Nature* of the *Salt* offending in the Maſs, yet we are not at a loſs to be doing ſomewhat to the Purpoſe, 'till ſome Chance lets us into this Secret.

Hence, when we labour under Diſeaſes that can be aſcrib'd to any one or more of theſe Heads, we muſt follow the Rules that are hinted at below, in the Εὐοδία *Medicorum.*

If the Blood be hotter than it ſhould naturally be, ſo that the Laborants are always *Hectical*, by having their Pulſations more numerous in a Minute than they ſhould, along with a preternatural Heat in their Bodies, but moſt perceptible in the Palms of the Hands and the Soles of their Feet; then we are to conſider whether the *fix'd* or *volatile Salts* reign moſt, or whether the *volatile Acid* is predominant; not that I ſuppoſe them really ſuch, but I ſpeak *ad Apparentiam*; becauſe we find by daily Experience, that *Acids* amend the one Sort of the hot State of the Blood, and *gentle Abſorbents*, as *Pearl, Coral, Crabs-eyes* and ſuch-like, are profitable in the other: But, as I obſerv'd above, in both, the *Diluents*, &c. agree.

As to the *Flatus* produc'd by theſe hot States, as they are from a more volatile Cauſe, ſo are they more impetuous in their Effects. We ſuppoſe *Convulſions, Mania's, Vertigo's, Incubi*, and ſuch-like Diſorders to proceed from this *Wind*; we therefore give, in ſuch Caſes, Opiates to repreſs them; and even in ſome Caſes, *Spirit of Niter* is a good Medicine:

But

But 'tis enough to have hinted at theſe States in ſo ſhort an Eſſay. If we are guilty of that Ignorance which *Etmuller* (*Annotation. Practic. ad Inſtitut. Medic. Phyſiolog.* p. 82.) ſtoops to acknowledge: I cannot ſay how far this Advice ſquares with Reaſon, ſince Patience and Vigilance perhaps would better ſerve the Turn.

Fevers are the *Deſtroying Angel* of Mankind; and a thorough Knowledge of them, is a complete Syſtem of Phyſick. *They Ape a Plenitude, in that they are not cured but by Evacuation*, and the Medicines us'd in their ſeveral Species are but Preparatives to fit them for Expulſion. But I ſpeak chiefly with a Reference to a precedent Concoction ſhew'd in the Urine after the State, whoſe dropping a regular Sediment (by which I exclude the ὄρον ἀναλελαραγμένον, and the ἀποστασις κρεμνώδης) is a good Sign, if it continues ſteddily ſo. I ſhall not expatiate here farther than to divide them into a *Cauſus*, and a *Hectical* or *Malignant* Kind. If the Blood boils, (pardon the Term,) and over-bears extravagantly, let the Time of the Fever be what it will, nay, let it be what Sort of Fever you pleaſe, (*always excepting a Plague*, you are oblig'd to give the Cooling and Diluting Diet and Medicines to allay the Fever, by disjoining the Salts; ſuch are *Barley-water*, *Juice of Limons*, *Gas Sulphuris*, *Sp. Vitriol*, *Sp. Nitri dulcis*, *Emulſions* (unmix'd with *Acids*, for fear of Precipitation,) and ſuch-like. You ought not only to *aſcertain the Nature* of the Medicines which alter this Hurry; but you are oblig'd alſo to be careful to fix *on what Degree and Quantity* you muſt not exceed. In which Affair I believe a *Thermometer* might be of Uſe, ſuppoſing we knew what was their Degree of Heat whilſt in perfect Health; othewiſe Experience only can be your ſtandard Rule. *I have hinted at this, in order to warn the Young Gentlemen of the Faculty to keep in*

Mind,

Mind, that in all Fevers (ſtill excepting the Plague) *you muſt reduce them as near to the natural Heat (they us'd to be of when in Health) as you can, and keep them to it ſo long as 'till the Fever is diſmiſs'd through ſome Emiſſary.* Whenever the Fever is of ſuch a Species, that the Blood moves on too ſlowly, reſpectively ſpeaking; we then are oblig'd to ſteer another Courſe, and in Proportion to the Degree of the *defective Ebullition*, we muſt advance it by all the *Teſtaceous*, *Bitter*, *Fetid*, *fix'd* or *volatile* Medicines, internally adminiſter'd, or externally applied, till it arrive at a certain Standard, fitted for Expulſion; the Ignorance of which is the Bane of the Patient, and an *Opprobrium* to the Phyſician. In this *Species* then, *Coral*, *Crabs-eyes*, *Pearl*, *Serpentaria Virginiana*, (with *Bole*, *&c.*) *volatile Salts*, and the like, are to be given Internally; and *Bliſters* and *Suppedanea* Externally, are preſcrib'd. But I ſhall annex a ſhort Explication of *Hippocrates*'s *Aphoriſm* 29. *Sect.* 2. and bid adieu to this copious Subject: * *Incipientibus*, ſays he, *Morbis, ſi quid movendum videtur, move*; *vigentibus autem, quiſcere melius eſt.* (Where there are any Signs of a *Turgeſcence*,) as where the Humours [ὀρμαὶ] run *impetuouſly* and are like to *fix* upon any noble *Viſcus*; where there is a *Tenuity* and *Separation*, where there is any *Malignity* or *Peſtilence*, and where the Humours are *plentiful*); *then Evacuations are requir'd:* Only remember that ſuch Purgatives are not to be given, in any Time of the Fever, as may produce Effects beyond the Canal of the Stomach and Inteſtines. The *Rationale* of which is ſo obvious to every Thinking Perſon, that I need not annex it. You ſee I have chalk'd out the Rea-

* Ἀρχομένων τῶν νόσων, ἢν τι δοκῇ κινέειν, κίνει, ακμαζουσῶν δ', ἡσυχίην ἔχειν βέλτιόν ἐστι.

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ſon why I have always excepted the *Plague*, from the Management above-named: But I ſhall add, that where the Humours, in ſuch a Diſeaſe, are ſo *thin* that *they will not cohere*, the Spirits are in the utmoſt Danger of Evaporation; as in the contrary State, *where the Humours and Blood cohere ſo violently*, that they are immediately render'd incapable to obey the Propulſion of the Heart, there is no leiſure for Preparatives, and the Limits of our Choice are wonderfully narrowed; ſo that the Proceedure muſt of Courſe be haſty, and the Humours are beſt expell'd with *ſpecifical Diaphoretics*, by the Conſent of all Ages. As to the Particular Fevers, they are all terminated *Criticando*, (to uſe *Cornax*'s Term:) So that each Place has its particular Port for Evacuation; the Head, by *Hæmorrhages*; the Veſſels, by *Sweat*; the *Uterus*, by the *Menſtrua*, &c.

The Diſcovery of the *Bark of Peru* has furniſhed us with an Indication which never was anſwer'd fully 'till its Appearance; which I may call a *Period*, though I mean the Remiſſion of that Period only. So that not only *Intermiſſions* of *Agues*, and the *Remiſſions* of *Putrids*, but alſo *Periodical Diſorders*, ſuch as *Convulſions*, *Dry Aſthma's* and *Epilepſies*, receive Advantage by the adminiſtration of this Drug; as do all Evacuations of Humours that depend upon a Febrile Ferment, ſuch are *Hæmoptoe's*, the immoderate Flux of the *Menſes*, and ſuch-like. But this being ſo undoubted and known a Truth, I ſhall proceed to another Head.

As the Laws of Circulation now ſtand, we often are obliged to have regard to *the Hurry of the Humours*, (abſtracting from all other Conſiderations,) *with a wrong Determination.* Where they flow with Violence to any particular Part, ſo as to endanger the Patient's Life immediately; as we ſee it happens

pens in all Sorts of *Irritations*, as in *Pains*, *Coughs*, *Eruptions*, *Convulsions*, *Diarrhœa's*, and such-like. *In all Inflammatory Obstructions*, as *Pleurisies*, *Ophthalmia's*, &c. *In every Anomaly*, as Retreating *Gouts*, *Itches* repell'd, *&c.* *In Insalubrious Metastases*, &c. In all these, and such-like, one constant Indication is, *turning the Current of the Motion to an opposite Goal*, which is done by the proper *Stimuli* applied or administer'd according to the following Standard, *viz.* by an *universal* or a *particular Revulsion*; *for when the Motion offends in a violent Manner*, the larger Vessels are to be opened on the contrary Side, and the other general *Revulsives* are to be used; *but when the Motion is in some Measure allay'd*, *Derivation* (or *Revulsion* to a near, though contrary Part) is sufficient; and *when the Humour flows in no more*, *but is impacted in the Part*, we must then use *particular Evacuation* (such is opening the Vein of the Forehead, in a Pain of the Fore-part of the Head.) As to the Number of Ways this can be done; as to the Causes of this vitiated *Motion* of our *Fluids*; as to the particular and specifick *Stimuli*; as to the contra-indicated *Revulsives*; as to the Seasons of using *Revulsives*; as to the Rules and Seasons of *particular Evacuations*; I hope 'tis not expected I should now detail them.

There is an opposite Fault in our Fluids to what I come from mentioning; and that is, they frequently are *defective in their Motion*, *and suppress'd*, (*Quiete & Motu intermisso*, *peccant Humores.*) This the Ancients call'd a *Defect* of the *Expulsive Faculty*. I shall not enter upon the particular Causes of this Want of *Irritation*; but shall content my self to mention the general Methods of remedying this *Rest*, which is always perform'd by *Irritation*. But as each Part has some Conditions annex'd to produce this Change, so one *Specifick*, here, will not

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ſerve the Turn; but in *Aſtriction*, all *ſaline*, *bitter*, and other *Encoproticks* are requir'd. *In a Retention of the Urine*, the different *Species* of *Diureticks* are to be given, and the *Continent Cauſe* is always to be remov'd by a *Catheter*. *In an habitual Vomiting ſuppreſs'd*, give gentle Emeticks, or what will carry it downwards. *In a Suppreſſion of a Spitting from the Lungs*, all the inciding *Pectorals* are uſeful, ſuch as *G. Ammon. Flor. Benzoin. Extract. Croc. Milleped. Tinctur. Sulphuris*, &c. *In a Suppreſſion of the Menſes or Lochia*, give *Emmenagogues*. *In the Hæmorrhoids ſuppreſſed*, uſe the irritating *Glandes*; nay, ſometimes gentle *Cauſticks* are to be rubb'd on, as *Fig-Leaves*, &c. *In Ulcers ſuppreſs'd*, uſe *Cauſticks*, *Bliſters*, &c. near the Place, as alſo Nettling, *&c.* This I look on to be ſufficient to give us a Notion of this Head; and therefore I draw my Hand from off the Board.

There is yet one Thing remains unmentioned, and that is an *Adheſion of Humours to a Part:* And as it proceeds from this, that whenever any viſcid Particles, expos'd to the Air, loſe hourly more of their Humidity, and hereupon turn into a Cruſt at laſt; ſo they are never looſen'd without the *oleaginous* Medicaments. This holds true in our *Ear-wax* ſticking cloſe to the *Meatus Auditorius*, where, by Injections of *oily* and *emollient* Medicines, 'tis at laſt looſen'd, and thrown out. So it often happens in dry Conſtitutions that the *Fæces* ſtick cloſe to the *Plicæ* of the *Inteſtines*, which are ſafelieſt looſen'd by *oily* Medicines (by the *Mouth* and *Anus*.) This is yet moſt of all remarkable in the Lungs, where the violent Adheſion of the viſcous Phlegm requires a vaſt Force and frequent Impulſes to ſhake it off from the Fibres it ſtrongly adheres to, and which is not in this Caſe promoted one *Iota* by any Inciding Medicines in the whole *Materia Medica*; nay, it were well if I

could ſay they did no Prejudice in this Sort of Adheſion; but if they take plentifully of the oily *Linctus's*, they will glib the Orifices, and, by leſſening the Adheſion, the Spit, which before fatigu'd the Patient almoſt to Death, obeys each Shock of the Breaſt and Lungs, and comes eaſily up.

Having thus, in ſhort, given you a Sketch of the *Indicants* that naturally ariſe from the Conſideration of the Fluid Parts, I ſhall proceed to give you a Detail on them in the Conſiſtent and Solid Parts.

Though it be a great Truth that the conſiſtent Parts only are vitiated ſecondarily from the *Vitia* in the Fluids; yet it is not my Buſineſs here to diſpute how the Parts come to be affected by ſuch depraved Juices, for that Phyſicians are never called on to prevent ſuch beginning Vitiations; and therefore I ſhall here only conſider them as already bred.

When any of the *Mouths of the Veſſels are opened, or even eroded*, there ariſes an Indication to make uſe of all the *Styptick* or *agglutinative* Medicines, and, if *external*, of *Cathereticks*, to ſhut and contract, or criſpate the Orifices. Whatever Medicines have not ſome one of theſe Powers, their Operation then is only accidental: So that *Crabs-eyes* or (which are more porous, and more effectually work, as they are ſpecifically lighter), *burnt-Hartſhorns* can only curb a *Diarrhœa*, as they abſorb the Humidities or Acidities that occaſion this Irritation and Evacuation. Having follow'd the Advice of a great Man in uſing a *Suffitus* of *Calx viva* on Vinegar in an *Hæmoptöe*, (where all Medicines prov'd ineffectual, and where the Stream was ſo copious, that immediate Death muſt have been uſher'd in by it,) with a ſurprizing Succeſs; I begun to make Enquiry whether the Steams were not ſomewhat *Catheretick*, or what other Quality it acted by; I found that there was a Stypticity, when Lime and Water were permitted to evapo-

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rate into a Recipient. And as to the Vinegar, there can be no Queſtion how much its Spirit, though diluted with its Phlegm, is ſtyptick: However, I can hardly believe but that the Ebullition had ſnatcht up ſome few Particles of the Lime it ſelf, which made it ſo immediately ſucceſsful. If I am ask'd how *Riverius*'s Mixture of *Sal. Abſinth.* and *Succ. Limon.*; as alſo how *Opiates*, and ſeveral other *Arcana*, made Uſe of in Evacuations, produce their Effects, if the above named ſhould (as they do often) fail? I ſhall anſwer 'em, That Diſeaſes ſeldom are the ſame in Individuals, and that I am now only mentioning Indications ſeparated and abſtracted from any complex *Idea*, and I leave each Perſon to his Reaſon to guide him in the Neceſſity of the Choice.

It ſometimes happens that *Fat or ſome fleſhy Subſtance, ſuch as* Polypi *in the Heart or Arteries*, ſtung up the Paſſages irremediably; for where they are *External*, if *Diſcutients* and *Emollients* fail of their Effect, *Corroding* Medicines, or the Knife, or Fire, will eradicate them; which, however, are ſafelieſt neglected where they are affix'd to any tendon or great Artery: So the *Cauda Equina* and *Prurigo* in Women are either diſperſed; or, if more ſtrid, then Burnt-Allom or *Ægyptiacum* are good, or the Knife is us'd (which is more eaſily done, to one Timorous, by a Horſe-hair ty'd a-round it.) If it ſtops the Circulation about the Heart, the only Relief, which is very ſmall, is knocking the Breaſt after a full Inſpiration. *Foreſtus* commends in *a Carcoma of the Teſtis*, *Ciner. Sermentac. Nitr. aq. but. & indult.* L. 26. *Obſ.* 18.

If the Parts unite which ought naturally to be diſjoin'd, we muſt take a ſhort View how far they are remediable. I remember to have ſeen a Child which I was call'd to, who paſs'd the *Meconium* through the *Vagina*, the *Anus* being imperforated;

I began to consider whether the intestinal *Duct* was continued to the *Foramen*, or whether it terminated at the usual Place of Perforation, which I look'd upon to be the *Cynosura*, to determine me: As far as I remember, I believ'd the *Sphincter* terminated at the *Anus*, and I did accordingly give the Surgeon Directions to observe narrowly whether the *Aperture* might not be made there: What was done I never had a second Opportunity to observe. But I must add, that whereas it is commonly said (without any Restriction) that such an Imperforation is not to be medled withal; I must beg leave to dissent from those Gentlemen; for if the *Sphincter* terminates at the *Anus*, and the Canal be no Part of it, nothing can be safelier attempted; and if it be a Part of it, yet it is not very difficult to contrive an easy Method how to accomplish the Task; which I shall mention, if ever I have farther Leisure to put my Papers into Order. Under this Head, the *Adhesion of the Lungs to the Pleura* is to be consider'd, which can be remedy'd, if not too strong, by the violent Motion of the Arms, and Breast, strong Expirations, and oily Medicines internally; unless you are willing to follow *Hippocrates* his Advice in the Matter, in opening at the Point of Adhesion, and by thrusting in a Pipe, to which a Bladder is fix'd, and blowing up this Bladder, in order to destroy the Coalescence: But having hinted at this, I shall pass to another Paragraph.

An *Atonia*, or a *Laxity*, is the Basis of many Disorders, as the learned *Baglivi* has sufficiently made out in his *L. de Fibrâ Motrice*, 'tis reliev'd by all the *Aromatick* and *Styptick* Drugs; the fine of which evaporate the Humidities, whilst the others contract the Fibres into a narrower Compass. 'Tis upon this Head, that *Biondi*'s *Pills* have been found a mighty Secret in the *Vertigo*: 'Tis for the

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ſame Reaſon, that the *Tinctura Lunæ* is ſo uſeful in the Loſs of Memory: So in the Relaxation of the *Phrenick Nerve*, we find *Stypticks* adviſ'd, and even an Injection of them after Section. The Laxity of the Glands of the *Uterus* in the *Fluor Albus* is reliev'd by the abovenamed Medicines. The *Turks*, after their *Baſtonading*, find *Alcanet* a ſovereign Remedy. If a *Softneſs of the Junture of the* Sutures *in Children remains long after the Birth*, 'tis amended by *Aromaticks*, *Sulphur*, and *Nitre*. In a *Tympany* (which I take to be the *Hydrops Epiploicus*, and which I have upon Diſſection ſeen, where the Danger is in ſpilling the Contents into the Cavity of the *Abdomen*, which then turns it to an *Aſcites*; for as a *Vomica* is leſs dangerous than an original *Phthiſis*, becauſe the *Cyſtis*, the Matter is contain'd in, is between the Lungs and the *Pus*; ſo a *Tympanites* is leſs ſudden than an *Aſcites*, where the Tunicks of the *Omentum* keep the *Lymph* from immediately affecting the *Viſcera*); in a Tympany, I ſay, to hinder this Effuſion, we find *Vitriolum Martis* commended internally, as alſo *Spir. Sal. Coagulat. in Aq. Ceraſ. nig. C*; and externally, cool Fomentations of *Nitre*, and ſuch like; we alſo find *Luſitanus*, L. 2. *Obſ.* 48. commending the Spaw's near *Liege*, which, whether he means the *Savinir* or *Pauhont*, have a Stypticity in them as they are *Chalybeate*; and modern Experience inſtructs us that our *Tunbridge* Waters are uſeful in this lax Habit, which diſpoſes to a Dropſy. But enough of This.

The next Head is *Obſtructions*, which was us'd (to any who has been vers'd in reading the Ancients) to be the *Aſylum* in all unknown Diſtempers; and to ſay the Truth, modern Phyſicians fall little ſhort of the ſame *Jargon*. It is own'd to be the commoneſt Cauſe of theſe Diſorders, but not the only. The ſeveral Tumours depend on this Head; ſo do *Apoplexies*, *Palſies*, and ſuch-like: So that

Volumes are compil'd on this one Indicant, all which are a *Crambe repetita.* In general, all the *fixt* and *volatile Salts*, all the *acrimonious* and *bitter* Plants, all the heavy *mineral* Preparations are here uſeful; ſuch are *Sal. vol. oleoſum, Sp. C. C.* &c. *Sal. Geniſt. Juniper*, &c. *Rad. Raphan. ruſtican. Gentian*, &c. *Æthiops mineral. Chalybeates in Filings or Infuſion, Antim. Diaphoretic*, &c. *Sem. Sinap.* &c. But as it depends on a State of Blood producing it, and in this Senſe is a *compound Indicant*; (for the *Fluids* don't offend in *Viſcidity* only, but the *Solids* become alſo too *narrow* for 'em); if then it depends, as *Baglivi* obſerves, on an exalted State of Humours, where the Fibres are therefore obſtructed, becauſe wrinkled by the exceſſive Heat; we are accordingly oblig'd to act with a *complex Intention*, to open, yet cool; which in themſelves are a ſeeming Contradiction, yet eaſily reconciled to daily Experience. In this Caſe 'tis obſervable, that Spaw-Waters that are *Chalybeate*, cool; and yet deobſtruct gently in *Palſies* from *Bilious Colicks*; and I have in this Caſe ſeen promiſing Effects from *Vitriolum Martis, Sal. Prunell.* and *Decoctions* of *Santalum.* In external Caſes, *Repellents*, *Diſcutients*, *Emollients*, and *Suppuratives* are the Complement of Applications; but *where the Impaction is ſtrong*, we proceed to *Sinapiſms*, *Bliſters*, *Cauſticks*, *Aperſion*, and *Section*; particularly where the Obſtruction is total; ſo that none of the Juices can recirculate, as is the Caſe of *Gangrenes.* Should I annex all the Cautions hereunto belonging, it would ſwell this Book into more Pages than I have Leiſure to write; and it muſt be conſider'd that this is deſign'd only as a Sketch of a larger Tract.

The *Stone* of the ſeveral Parts of our Body, is an Effect that deſerves a ſerious Diſcuſſion; how they petrify we need only conſult the ſeveral petrifying Waters, and conſider what is obſervable in them.

them. I remember about 19 Years ago to have met with one of this kind in *Northumberland*, on the South-ſide of the River *Alne*, over-againſt a Place call'd *Hawkwell* near *Alnewick*; where, from the South, there runs a Rivulet into the River; 'tis towards the Eaſt-ſide of this Brook, about One hundred Yards or two, and upwards, on the Bank-ſide; there I remark'd the Fountain perfectly clear and ſweet, and, in running down, it leaves jelly'd Icicles, and all the little Plants in its Way are cruſted over with Stone: If the Particles of Stone in this Water were not very minute, they would ſubſide and be viſible; but being, as I may ſay, *in ſolutis principiis*, they cohere in their Courſe into a Subſtance, which, when the Humidity is perfectly exhal'd, is Stone: Upon Coction of two Quarts, there were not above a Grain or two of a white Sand at the Bottom. 'Tis doubtleſs thus in humane Bodies that Stones cohere; and as the Heat in Bodies helps to exhale, and the *Remora's* to Motion make them approach, they ſooner harden, and turn to Stone, I can ſay little farther to the Preſervative's, than that *Bitters*, and ſuch Medicines as will hinder Congelation, may probably concur to make this *Lapidifick* Matter paſs off in *ſolutis Principiis*. 'Tis ſaid, tho' doubted, that the *Indians* never heard of ſuch a Diſeaſe, and that this is owing to their drinking of Thea; but I believe I may add, (if we credit the Relation) that there may be ſome doubt that our Waters boil'd even for Thea-Drinkers, are not quite ſo clear of ſtony Particles as theirs may be; but all this being Conjecture, I leave it. Whenever the *Stone* has no Paſſage for its Expulſion, nothing can follow but inevitable Death: But in ſuch Places where we can reach it, a double Indication ariſes; the one is *Glibbing the Paſſages*, and the other is *Giving a Shock to the containing Parts*. But the firſt belonging to another Head,

I ſhall not anticipate my Obſervations, only here ſhall remark that *Emeticks*, *Cathartick*s, and *Diureticks*, *Sneezing*, *Riding*, *Jumping*, and ſuch-like, are *what expel it from the Kidneys*; *from the Bladder*, *Diureticks* or *Lithotomy*; *from the Stomach*, *Emeticks*, *Cathartick*s, and Acid *Lithontripticks*; and in ſhort, Expellents in all Senſes. I cannot paſs by one Obſervation of an ingenious Phyſician, whoſe Practice my Father had for ſome Years the conſtant Inſight of; who told me that the Doctors Preſervative againſt the Stone, was, common Salt at Breakfaſt; which *Helmont* alſo praiſes.

Many and diſmal are the Effects of *Worms*; ſo that *Pechlin*, *p.* 160. ſays, *Nullum tam peregrinum eſſe Symptoma*, *tamque* Δαιμωνιακὸν, *quod Vermes excitare non poſſint*; the Cure of which, *Morellus* tells us, is thus perform'd, *Quæcunque Qualitate vel manifeſtâ*, *ut Acrimoniâ*, *Amaritudine*, *Salſedine*, *vel Aciditate*, *quos Sapores Lumbrici faſtidiunt*; *vel occultâ*, *potiuntur*, are ſuch as kill them: Hence Juice of *Lemons*, *Sp. Sulphur*, *Salt*, *Sem. Santonic.* *Æthiops miner.* *Corallin.* *Ens Veneris*, &c. are to be given in what Forms beſt pleaſe the Patient; after which expel them with proper Medicines. It would be proper under this Paragraph to mention the peculiar Remedies, but that the Brevity of theſe Hints will not allow of it: For other Live Animals, ſuch as *Leeches any where*, they are beſt kill'd by *Salt-water*; For the *Ton* and *Dracunculi*, they are not the Produce of our Clime, nor can I ſtay to inſtance farther of them.

The next Head I am to mention, is, *Extraneous Bodies plac'd within us*, *or on the Surface of us*: And altho' I ſhall ſpeak againſt Indications taken from *Procatarctick* Cauſes; yet, I muſt here add, that I ſhall then only ſpeak of the external *Procatarctick*, which is not permanent, and not of the internal. I am ſenſible that *Poiſons* have a complex Indication; yet,

yet, I believe it will be pardonable to omit that Nicety, and ſpeak of 'em all under one Head, and not ſeparately, as I deſign'd to have done. It is remark'd in general, *That they are carried off by that Port they entred at: After which you are to ſpecificate the Antidotes*; ſo that *Antimonials*, after ſufficient waſhing of the Stomach, are to be precipitated by a little *Salt*, which effectually curbs any farther Effects from them: *Arſenick* requires *Sal. Tartar. Mercury Sublimate*, *Alcalines*, but more eſpecially warm Water, being ſoluble in it. A good Quantity of that given, waſhes it off, and takes off all Effects from it. I muſt add, that great Haſte muſt be made in ſuch Caſes; ſo that *Arſenick*, after 3 or 4 Hours, is irremediable, as I had the Experience of, in a poor Miſcreant, who believing the World was weary of him, took a Doſe of this Poiſon at Nine in the Morning; the Apothecary, who ſold him it, being call'd, deſired I would favour him with my Aſſiſtance, at One: We gave him *Diluents*, *Oils*, and whatever we had near to us, to make him vomit plentifully; which he did; and having view'd narrowly what he threw off, and having not been able to obſerve any Particles ſubſide; we then gave him *Sal. Tartar.* in Water, and made him drink of it in a plentiful Manner, but in vain; for he began to have violent *Tremors* upon him, and dy'd convulſive at Nine the next Morning. Upon Opening him, 'twas obſervable that the Stomach and Inteſtines were ſo tender, that they would hardly bear the Touch without tearing; and the Vomiting and Waſhing made it plain to us, why there was not the Quantity of a Grain of the *Arſenick* on the Stomach and Inteſtines; but they were gangren'd in many Places to the Breadth of a Shilling, which appear'd the plainlier, becauſe all the *Mucus* was thrown off. There is one *Quære* to be propos'd; I remember

that

that *Konig.* in his *Regn. Mineral.* ſays of *Arſenick*, that 'tis ſoluble in Water; if ſo, 'tis much this Fellow ſhould not have been cur'd, who immediately upon taking the Poiſon, laid himſelf flat upon his Belly, and drank what he could bear from the River it ſelf. As to the *Bites of Poiſonous Animals*, you are obliged to ſcarify, burn, and do whatever will call out the Poiſon, fix'd then only on the Surface, and to give all the proper *Alteratives* internally.

Whoever have the Misfortune to have only Share of the Poiſon evacuated, often ſuffer for it all their Lives afterwards; an Example of which I remember to have ſeen in an *Italian* Soldier at a *French* Univerſity, who had been bit by a *Tarantula*; every Summer he was ſeiz'd with a Return of the ſame Symptoms, as if he had been newly bit; ſo that in the Year 1693, he ſunk down as dead, whenever the Guitarr was not play'd on; and at the Beginning of the Tune again, he ſtretch'd himſelf, and gradually aroſe, and friſk'd and danc'd after an odd and awkward manner; which, I do aſſure you, little pleas'd me; and thus he continued for Seven or Eight Days, till a Jaundice appear'd, and clear'd him of his Malady for that Year. As to other *extraneous Bodies* in the *Eyes*, *Ears*, *Noſe*, *Vagina*, and other Parts, I hope the intended Brevity of this Book will plead me an Exemption from farther Trouble on theſe Particulars: Only I ſhall note, that the Effects of *venemous Fumes* are here alſo to be amended; ſo that we may correct *Mercurial ones*, by *fixt* and *volatile Salts*; thoſe from *Lead*, by a *Tincture* of *Hædera terreſtris*, ſays Mr. *Boyle*; thoſe from *Coal-Mines* are prevented by a plentiful Affuſion of Water, but internally by *Vinegar* and *Caſtor*, ſays *Etmuller*, and ſo of the reſt.

As for the *Want of any Member*, there is no Remedy, ſave ſome mechanical Inventions for ſome few

few Caſes, ſuch as *Glaſs-Eyes*, *Spring-Arms* and *Legs*, unleſs ſome *Talicotius* will plead for farther; but where any internal Part is cut, ſuch as a Nerve, there is no Remedy.

Where-ever the *Parts are larger* than naturally they ſhould be, where I would be underſtood to take the word *Large* to denote any Increaſe of Dimenſion; in ſuch a Caſe *Stypticks*, *Ligatures*, and ſuch things are made uſe of: So in a *Mydriaſis*, *Foreſtus* adviſes *Roſes*, *Mint*, *Spikenard*, &c. *Pomphylix*, *Acacia*, &c. for Troches; ſo in the Πῆγμα an Injection of *Stypticks* in advis'd; in internal *Aneuriſms*, whether of the Lungs, Neck, *Teſtes*, or elſewhere, *Terra Japonica* is commended. In *Cole longiori*, *Hildanus* commends an Invention which you may ſee *C.* 6. *Obſ.* 61. So in *Vaginâ largiori*, *Inſeſſus* of *Stypticks* are of Uſe to hide a Crime, or add a neceſſary Condition for Propagation.

The *Teeth* are filed *if too long*; and Faults of the Eyes fall under the conſideration of Spectacle-Makers; and Dr. *Muſgrave* well obſerves, that Apoplexies, ariſing from the Veſſels of the Head *larger* than by Nature they ſhould, are help'd by *Stypticks*.

But where *the Parts are leſs*, *ſhorter*, *tenſer*, *harder*, *or thicker* than they ſhould be by Nature; *ſoft*, *oily*, and *emollient* Medicines are here requiſite; ſo that the Denſity of the Membranes of Infants is to be aided by giving internally *oily Medicines*, (nay, ſometimes by the Nails and the Knife.) *The Hardneſs of the Skin* often hinders the full *Eruption* of the *Small-Pox*; in which Caſe, whoever will give himſelf the Trouble to turn over the Antients, will find 'em adviſing ſoftning Internals and *Topics*.

The Hardneſs of the Verêtrum (*Cornû inſtar*) is cur'd by *Emollients* and gentle *Diſcutients*, in *Luſitan. L.* 2. *Obſ.* 106. *The Criſpature of the Lungs in Hereditary*

Hereditary Conſumptions is beſt provided for by *oily* and *ſmooth Medicines*. *The Hardneſs of the Os Uteri internum* is amended by greaſie *Unguents* and *emollient Fomentations*. *The Conſtriction of the Glottis* is help'd by an Application of *Milk*, *Yolks of Eggs*, and *Sugar*, according to *Barbette*, *Anatom. Practic. c.* 4. *The Inflexibility of the Os Coccygis in Old Women*, which much impedes an eaſie Labour, is, according to *Sylvius*, *p.* 552. amended by a *Suffitus* of *Roots of Althæa* and its *Leaves*, *Mallow-Leaves*, *Tops of Melilot*, *Fœnugreek*, and *Line-ſeed* in Water. *The Smallneſs of the Ureters* is aſſiſted, as I have often experienc'd, with *emollient Baths*. *Glyſters*, *Linctus's*, and external *Unctions*; and if the *urinary Paſſage*, *or the Orifice at the Sphincter* be *leſs* than uſual, if theſe Medicines have not their Effect, then Recourſe may be had to *Mayern*'s, or the *Ægyptian* Method. *If the Parts be ſo Tenſe that they are us'd to crack*, as it often happens in fiſſur'd Breaſts, or in Women when with Child, then *oily* Medicines are to be given, by the Advice of *Bonetus* and *Etmuller*. Thus I have given a Sketch of this Head.

When the *Site or Connexion of the Parts* are *chang'd*, *Reduction* is to be attempted by ſeveral Methods; thus in the *Iliac Paſſion* the Complication is unty'd by *Mercury* in Subſtance, the *Bellows*, or the *Operation*; ſo the *Lordoſis* and *Cyphoſis* are cur'd, if freſh, by *Extenſion*, and as in ordinary *Luxations*: This being moſtly the Province of Surgeons, I ſhall only add ſome few, but uſeful Remarks on the Varieties of Births. 1. *In all Poſtures from the Vertex to the Acromium*, you are to deliver the Woman by the Head. 2. *In all Poſtures from the Acromium to the* Feet, by the Feet. 3. *Whatever the Poſture be*, *if the Funiculus or Placenta hangs out of the Vagina*, you muſt deliver by the Feet, unleſs the Child is fix'd. 4. *The Noſe of the Child* muſt look

look towards the Back of the Laborant. 5. *Whereever the Fœtus is to be thruſt back into the Uterus, whatever the Poſture be, or whatever Part preſents,* the *Nates* are to be plac'd above the Head and Breſt.

Irritation is what gives the Phyſician double the Credit to what any other *Indicant* does; for under this Head fall *Vomitings*, *Coughs*, *Diarrhœa's*, *Pains*, and many more troubleſome Diſorders, which are not ſuppos'd or dreamt of, by the ordinary Herd of the Faculty, to retain to it. Thus we ſee that *exceſſive Hunger* is allay'd by *Opiates*; *Salacity* is an *Irritation*, which is moſt effectually allay'd by *Smooths*, and at laſt by *Opiates*. I ſhall in another Place recount the Reaſon why the *Turks*, at the Battle of *Levenz*, dy'd *Haſtis erectis*. *Convulſions* are not allay'd without *Opiates*, but they being compounded of many Cauſes, I may have an Opportunity, in the Cloſe of this Diſcourſe, to mention more of them. Thus moſtly, in this Caſe, *Opiates* are requir'd; which have different Names given 'em, as the *Species* of *Irritation*, they are to allay, will allow of: Hence they are called *Anodynes*, when Pains are to be allay'd; *Narcoticks*, when ſome Part is to be benumb'd; *Paregoricks*, (ab ἀγορέω, *concionari & conſolor*, in a Metaphorical Senſe;) when the Part affected is to be Aſſwaged and Comforted; *Hypnoticks*, when Sleep is to be their Effects. To expatiate on this *Indicant* would be too tedious for my preſent Aim; and therefore I ſhall only remark, that ſome *Irritations being critical*, cannot be ſuppoſed to belong to this Paragraph, unleſs they be unbearable; ſuch are the *Pains of Labour*, the *Pains of the Gout*, &c. which require ſuch Things as will promote, inſtead of allaying them. As to many other *Indications* ariſing in the Cure of *Irritations*, they, belonging to other

other Heads, are not the Conſideration of this Remark.

Ulcers, are what require in general *four Indications*; *Evacuation*, *Mundification*, *Exiccation* and *Cicatrization*; beſides *internal Corrigents of the peculiar Acrimony* reigning in the Juices: (The *Firſt*, for evacuating the Quantity of Humours in the Body; the *Second* and *Third*, in order to carry off the Humours neſtling in the Part affected; the *Fourth*, in order to purſe up the Breach and cloſe it; and the *Laſt*, For Cutting off the Supplies of acrimonious Particles, which keep Ulcers on Foot; for 'tis a conſtant Obſervation that *Cacochymical* Perſons, whoſe Blood is too *Corroſive*, never are cur'd, till their Blood is render'd *Smoother* and more *Balſamick*.) All which, we ſee, are a Complex of Cauſes, and ought to be referr'd to other Heads; but my Leiſure not allowing me to be ſo nice at preſent, I believe it ſufficient here, to mention ſome few Examples, to illuſtrate what I have advanc'd, and ſo to take leave of this *Compound Indicant*. In a *Gonorrhœa virulenta*, we give *Purgatives* of *Caſſia*, *Rheubarb*, *Cream* of *Tartar*, *Mercurius dulcis*, and ſuch-like, for *three* or *four* times; after which, we uſe, for a *Month* or *ſix Weeks*, or longer, if occaſion requires, *Balſamicks* of *Turpentine*, *G. Guaiac. Balſ. Copaibæ*, *Rheubarb*, and ſuch-like; the firſt deterge and cleanſe the Part, whilſt the latter dry the Ulcer: For the latter Intention, we often uſe alſo Injections of *Mercurius dulcis*, *Lime-water*, and *Honey* of *Roſes*, or the *Decoctions* of *Roſes*, *Sac. Saturn.* and *Mel Roſar.* In *Ulcers of the Kidnies*, after due Evacuations, I have found *Sydenham*'s Pills of *Flos Unguentor.* along with ij. or iij. Grains of *Mercurius dulcis*, every Day, in *Roſe-water*, effectual. In *Ulcers of the Bladder*, *Groenvelt*'s Method, with *Cantharides*, deterges; after which, *Terebinthinates*, and gentle Medicines of *Coral*, *Amber*, and ſuch Exic-

Exiccants, are adviſable. In *Venereal Ulcers of the Mouth* (where the Palate is not Carious) after proper Purgatives, either the touching 'em with *Mercurial* Water, or a *Suffitus* of *Cinnabar*, to dry them, are uſeful. I have known a Salivation, rais'd by a *Suffitus* with *Cinnabar*, cure an Ulcer of the *Uterus*. *In Fiſſures of the Breaſts*, *Minium* and *Nut-Oil* was made a Secret of, by a Midwife I communicated it to. *In an Ulcer of the Inteſtines*, *Terrebinthinates* are of uſe. As for *Abſceſſes*, after they are open'd, you treat 'em like common Ulcers, tho' the Condition of the Parts, as to Moiſture, oftentimes makes us change our Mundificants for Exiccants. All *Critical Tumors* are to be Impoſthumated, being then fitted for the Evacuation of the Venenous Particles, and tho' they ſhould lie too far out of our Road to have any thing apply'd to 'em, as they do in the Body of the *Uterus*, we however can treat 'em with a plentiful Diet; alſo Sternutatories conduce much to this End. *Excoriations*, are healed by Exiccants only; and thoſe of the *Scrotum*, *Foreſtus L.* 7. *Obſ.* 39. *in Scholio*, cures by *Unguent. de Ceruſſ.* and *Lithargyr.* *External Ulcers* are treated in the ſame manner.

Wounds admit of a double Indication; for either they may immediately be united by the *Suture*, or the *dry Stitch*, and a Plaiſter notch'd for that End; or by *Deterſives*, *Mundificants*, *Sarcoticks*, and *Epuloticks*: *Diſcreet Surgeons* chuſe the latter Method, not becauſe it's ſafer only, but for other Reaſons beſt known to the Operators. The Medicines made Uſe of for theſe Ends, being repeated in every Author *ad Nauſeam*, I ſhall only hint at a Wound of a *Lymphatick*, which ordinarily turns *Sinuous*, as was evident to me in a Patient I was call'd to; every Dreſſing, the Surgeon took out a Spoonful or two of *Jelly*; but at laſt, with great Care and many Operations, it was heal'd in a quar-

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ter of a Year. For any Caſe of this Nature, *G. Lac.* and *Moſs of a Man's Skull* mix'd and thrown in, are look'd on as a Secret.

Laſtly, it happens that there is often a *Scurfineſs and Roughneſs of the Parts*, which, after due Evacuations (which are to be proportioned according to the Degree of Obſtinacy) and the Application of ſome gentle Stypticks, as *Vitriol*, *Allom*, *Juice of Limons*, *Litharge*, *Vinegar*, *Lapathum acutum*, and *Mercurials*, &c. externally, are ſucceſſfully carry'd off.

Having run through all the *Vitia of the Fluids*, *Solids*, and *Superflua*, I can't in Juſtice omit one Thing, which yet I believe very rare, and that is *Faſcination*; 'tis, according to *Zacutus Luſitanus*, *L.* 3. *Obſ.* 134, call'd *Morbus trans Naturam:* Whatever my Opinion is on this Affair, I can only add two Things, and that is, ſhould I ever find any one performing Actions beyond the uſual Limits of Nature, either as to the Affections of the Body or Soul, I muſt conclude 'em under the Power of ſomewhat above the Reach of this Nature: So that when the ἀφιλοσοφοὶ, or the ἄμουσοι, talk Wiſely, and diſcourſe Nervouſly, or when the ἀκινησίοὶ friſk and move themſelves beyond the ordinary Actions of Mankind, we may conclude 'em (and then only) under a *Faſcination*; but what Medicines have to do in this Affair, I frankly confeſs, I have never learn'd: If indeed the Effects produc'd by ſuch a Caſe, are the *Alteration of the Juices*, I believe Drugs may then produce great and good Events; but when the *Fancy is Obſeſs'd*, 'tis Folly to ſtretch the Medical Art beyond its Limits; and therefore *Natural Religion* obliging us to acknowledge a Supreme Being, we muſt neceſſarily ſubmit to own that the Permiſſions of That Being give Riſe to ſurprizing *Phænomena*, which fall not under the Conſideration of Art, and therefore this is neceſſarily the Province of another

nother, and very different *Species* of *Juriſdiction*, and (to be ſincere) it muſt be under the Direction of the Divine Miniſtry; where the Hand of Man is ſhortned, and the Glory of the Higheſt is exalted: In this we do but follow the Steps made in Scripture, where the Δαιμωνιακὸς was not Cur'd, but by the Hand of our Bleſſed Saviour. I am not ignorant that the Divines ſay it was an *Epileptick* Perſon; yet we muſt believe the Expreſſion, and Juſtice can be done, by believing it rais'd by a *Permiſſive Power* granted to the Devil.

Thus have I, in a ſhort Sketch, given you an imperfect Table of *Indicants*; to which, if I ſhould add the Εὐοδία *Medicorum*, I ſhall have given ſufficient Proofs of the Uſefulneſs of this Method, beyond all the imaginary and fancy'd ones of thoſe *Students of Phyſick* who place their whole Confidence in Mathematical Demonſtrations alone: But as my Deſign is no other than to whet the Reader to a further Enquiry, it muſt only be expected that I ſhou'd juſt hint at the Particulars, I reſerve for a fitter Seaſon; where what I have advanc'd, ſhall be made evident to Demonſtration, through the whole Body of Practice.

All Cures, ſays *Hippocrates*, are made by *Addition* and *Subſtraction*; and he adds, *Contrariety* is the general *Baſis* of the Art of Phyſick; and this the ſame *Divine Coan* terms Ἐναντίωσις which he underſtands to be as well in Diet as Drugs, *Aphor.* 22. *Sect.* 2. and *L. Epid.* 6. *Sect.* 8. §. 46. This *Addition* of ſomething wanting, and *Subſtraction* of what is too abundant, is an Argument that the *Cauſes* are to be taken away in the Cure of Diſeaſes. Let us take a ſhort View then of the *Cauſes* that are to direct us in our Courſe; and how they are to be marſhall'd when they are join'd in any Diſeaſe.

There are Three Cauſes; Firſt, The *External Evident*, or *Procatarctick*, (call'd alſo the προγεγενημένη); which having left nothing fix'd upon us, only requires avoiding of 'em; ſo in a Diſpoſition to a *Furor uterinus*, we muſt take care that the Fire be not fed by the Preſence of what is the Subject of the Appetite; for ἐκ τῶ ὁρᾶν γίνεσθαι τὸ ἐρᾶν. So in *Peſtilential* Caſes, we muſt avoid the Occaſions; *citò*, *diù*, *tardè*, *eundo*, *morando*, *redeundo*. Having ſhew'd above, but more at large in the *Euodia*, how little this Cauſe is to be regarded in guiding us how to Cure, I ſhall proceed to the reſt.

The next Cauſes are the *Antecedent*, by which I mean the deprav'd Humours in the Body, endow'd with a Power, upon any occaſion given, to produce very dangerous Symptoms; and ſuch is the *Viſcid* in the *Pleuriſy*; ſuch are *Bilious Humors* in a *Colick*; ſuch are *Salt Humors* in a *Conſumption*.

The Continent, is the *Antecedent acting*; ſo the *Salt Humours* fix'd in the *Lungs*, are this Cauſe; as alſo *Pus* in an *Abſceſs*; *Water* in the *Cavities*, in *Dropſies*; *Venenum* lodging in the *Stomach*: and *Urine* in the Bladder in a true and genuine *Iſchury*; all theſe, I ſay, are *Continent Cauſes*, or in other Terms, *the Immediate Cauſe*.

In general then, Diſeaſes muſt be cur'd by remedying their Cauſes in ſuch order as they began, unleſs ſome great Reaſon obliges us to alter this Method: The internal fix'd Cauſes are remedy'd by *Evacuation*, (under which Head I reckon alſo *Tranſlation* and *Extirpation*) and *Alteration*: *Evacuations* are *Emeticks*, *Cathartick*s, *Diaphoreticks*, *Diureticks*, &c. *Tranſlations* are all the *Revulſions* we make uſe of. *Alteratives* are of two Sorts; and both being contrary to the reigning Cauſe, I need not now mention their Difference: But it ſometimes happens that Diſeaſes are irremediable; and

and yet we are, for the comfort of the Sick, oblig'd to Patch for a while, by remedying ſuch Symptoms as would deſtroy the Patient of themſelves: Thus, in an incurable *Suppreſſion* of the *Menſes* from a *Tumor*, we are, according to *Sennertus*, *L.* 3. *C.* 3. oblig'd frequently to Bleed, to prevent the real or metaphorical Plenitude in the Blood, from whence many dreadful Symptoms ariſe. When I ſpeak of *Alteratives*, I would not be underſtood to confine myſelf to the Internal ones only, but wou'd have my Views extended to *Topicks* alſo.

This general Order holds good where the Symptoms ſupervening are gentle and ſlight, for then the taking away the *Antecedent Cauſe*, relieves, nay, cures; but when the Symptoms proceeding from the *immediate Cauſe*, are Violent, then are we oblig'd to have Regard to theſe Symptoms by remedying their Cauſes; thus *Agoniſtical Criſes* are not to be ſuppreſs'd, tho' not promoted, for that they often work a Cure, or pave the Way for it; but we are frequently oblig'd to have Regard to the Symptoms when Violent, even before we can remedy the precedent Cauſes. So that in an *Iliac Paſſion*, before the Obſtruction of the *Inteſtinal Fæces* can be remov'd, we are often oblig'd to amend the *Vomiting*, by allaying its *immediate Cauſe*, (*viz.* the *Irritation.*) What I here ſay of one *immediate Cauſe*, I would be alike underſtood, if there be more; as in an *Hæmoptöe* from *acrimonious Humours*; the *Acrimony* and the *Meatus apertus*, are two *immediate Cauſes* or *Effects*, (for I have hinted at my Reaſons for this above); the firſt of which requires *ſmooth* and *obtunding* Medicines; and the latter, Stypticks and *Agglutinants*. And as an *immediate Cauſe* requires our Care ſometimes even to the neglecting its *Original*; ſo one *immediate Cauſe* ſometimes over-ballances another in

like manner: From the imminent Danger of which, we are to ſteer our Courſe.

I ſhould, to the general Method, have added the Meaſures us'd in *Criſes*, for that they appertain to *Evacuation* or *Tranſlation*: They are to be promoted ſo long as they are *Critical* only (then *Liberali ac Liberâ Expurgatione* αὐτομάτως *quieſcunt*); for when they ceaſe to be ſo, they deſervedly loſe that Denomination, and are then *Symptomatical* and remediable by proper Methods nam'd above: But as to the particular Rules they are to be manag'd by, alſo as for mix'd ones, and as to the ſeveral *Metaſtaſes*, whether *Salutary* or not, it cannot here be expected I ſhould enter into a Detail of 'em.

Hitherto have I hinted at the Ἐνδιαχυέμενα; I have only one word or two to add about the Συνεδιαχυέμενα, and the Ἀνιενδιαχυέμενα, and I ſhall cloſe my Diſcourſe.

Cauſes, we ſee (for I mention nothing of Diſeaſes, or the Reaſons of thoſe Cauſes) ſometimes Concomitate and Co-indicate: ſo that I have ſeen in the Right Honourable the Lord *W——n, a Tertian Colick from a Suppreſſion of the Gout:* The Cauſes I look'd upon to ſtand thus; by an Application of cold Water to the pained Part the Humours were *repell'd* and *retain'd* in the Blood, Part of which, *ranging there*, produc'd this Ague; and another parcel of them *fix'd on the Inteſtines*, produc'd the Pain: This I take to be the Ὅτι of the Malady; as for the Διότι, I leave it to Enquirers more at Leiſure. Let me now proceed according to the the Methods I come from mentioning: The *Stuffing of the Blood with an impure and bilious Plethora*, requir'd *Evacuations:* The *Infarctus of the Inteſtines with Bile*, alſo co-indicated *Evacuation:* The *Shifting and Period*, requir'd the *Bark*; the *Pain*, *Opiates*: And Laſtly, *The Gout's lurking in the Body*, all the convenient *Stimulants* to invite *It* to

to its proper Station. I look'd upon theſe Heads to direct me in my Courſe I was to take, and having follow'd 'em, I accordingly ſucceeded: Upon conſulting the Experienc'd Dr. *Radcliffe* on the Caſe, tho' I recited him every Particular, yet his Anſwer was, that we ſhould forbear *Evacuations*; but I ſhould have endanger'd my Patient by ſuch a Neglect: However, *Quandoque bonus dormitat Homerus*, and his Civil Treatment of me, whilſt alive, will oblige me to believe, that 'tis as hard, even for the moſt Sagacious, to take a Caſe as a Face, at a Diſtance.

When Cauſes claſh with each other, and there is a Contrariety in 'em; I ſhall only mention, 1ſt. *That they are ſometimes ſo far on a Level, as that you muſt take 'em both off equally: ſo in a Palſy, and the immoderate Flux of the Menſes*; If your Intention is to Cure the *Palſy*, you increaſe the *Flux*; if, on the other hand, you Cure the *Menſes*, you render the *Palſy* irremediable; in ſuch a Caſe you muſt blend your Medicines according to the moſt Exigence. I remember *Schmidius* mentions that the *Bark* of *Seville* Oranges unripe, boil'd in Water, curbs the *Menſes*; (in which Dr. *Hamilton* follows him and *Etmuller*); but this Fruit being alſo *aromatick*, is an *Aperient*, and did ſometimes alone anſwer the End in this Caſe mention'd: So careful has the Divine Providence been over us, as to blend contrary Qualities in one Plant, to contraſt with ſuch contrary Effects in our *Bodies*.

2*dly*. Whenever they are contrary, and there is any Exceſs on either ſide; if *this Exceſs be ſmall, we muſt have Regard to the moſt urgent, and to that which Cures the moſt urgent, tho' they ſuffer a little by it*; *however, having ſome Eye to the contrary Cauſe*. So I remember to have been call'd to a Lady who had a *Dropſy* in the *Abdomen*, which was of Sixteen Years ſtanding, or more; ſhe was on a ſud-

den ſeiz'd with a violent *Fit* of the Stone; having paſs'd a large one, and ſuffering more ſince the Delivery of it than before, with *Syncope's* and *cold Sweats*, ſhe had reaſon to believe another was alſo paſſing. I had not much to ſay to that Head; but argu'd that ſhe was yet more dangerouſly held than ſhe imagin'd, and that another *Species* of Diſeaſe had ſeiz'd the Part, which was a beginning *Inflammation* of that Kidney, and that without *Bleeding*, it was impoſſible to relieve her; which ſhe yielded not to, for the ſpace of an Hour; upon this Head, that ſhe had a *Dropſy* upon her: But having perſwaded her of the immediate Hazard ſhe was under from the *Inflammation*, and the little Damage I ſhould do her by ſo ſmall a Quantity of Blood drawn off, ſhe conſented; and the Apothecary had not taken away two Ounces 'till ſhe cry'd aloud ſhe was eaſy; but four Ounces being tapp'd off, by keeping her from heating *Diet* and *Cordials*, ſhe recover'd perfectly.

3*dly*. *But where the Exceſs on one Side is ſo apparent, that we muſt, by indulging 'em in it, deſtroy 'em, 'tis reaſonable to give Eye to the moſt urgent only, and to That which acts as a Cauſe, and totally to neglect the other.* So in a *Lues Venerea* join'd to a *Hectick* (and even alſo a *Conſumptive Cough*, where there is no *Ulcer*) the curing the *Hectick* avails nothing to the Cure of the *Lues*, which yet ranges and re-produces the ſame dire Effects; all which I have taken off by a gentle *Salivation*, without any Regard had to the *Hectick*. So in an *Hæmoptöe*, where there is Danger of *Suffocation*; in this Caſe alone it is lawful to cauſe an *Expectoration* of the Blood; for tho' the Suffocation be δευτέρως-*agens*, yet it is the moſt urgent; and in this we follow *Galen's* Law, *ut Præcedat Sanatio ejus quod Cauſa eſt, vel magis urget, vel ſine quo alterum tolli nequit.*

Thus

Thus have I, in as ſhort a Manner as I could, made it plain, that the Heads, I mention, are the only *Baſes* to proceed on; and that whoever will range beyond theſe Bounds, is bewilder'd and plung'd in all the Difficulties that can befall a miſled Traveller: Whoever has the Fortune to know what Cauſe does affect us, many of which are evident to Senſe, is the likelieſt Perſon to ſerve the Republick in his Way; but I ſhall conclude, that Prudence muſt be the Portion to diſtinguiſh the Phyſician from the Empirick, ſince *La vera Regola, è ſaper rompere le Regole à Tempo & Luogo.*

Thus then, have I, with ſome Unwillingneſs, trod a Path for the Good of Mankind, which puzzles the Heads of the Thinking World, and yet is in itſelf Eaſy and Conceivable to the meaneſt Capacities. Why is it that the moſt Learned are not always the beſt and moſt Succeſsful Phyſicians, but becauſe they buſy themſelves in many Parts of Literature little, if at all, to their Purpoſe? Whoſe good Parts, if employ'd in the Advancement of their own Arts, would be ſufficient even to build a Profeſſion, much more to give Additions to one long ſince begun. But having ſufficiently tir'd my ſelf, I am afraid I ſhall give my Reader a Diſtaſte, if I ſhould add to what I have already advanc'd, eſpecially ſince I reſolve, ſome time or other, to Publiſh the *Practical Obſervations* at Large, of which theſe are only an Abridgment.

Criticon Febrium:

OR, A

Critical ESSAY

ON

FEVERS.

CHAP. I.

Of FEVERS in general.

THE deſign'd Brevity of this Tract cannot be ſuppoſed to allow me to expatiate upon the uſual Diviſions of *Fevers:* In which, I fear, much Time has often been ſpent to little Purpoſe; ſince it will appear that theſe Names brought no new Methods of Cure along with them, but left many Doubts upon the Practitioners; and thoſe, when they come to be ſeriouſly weighed, very trifling, and ſuch as prove an Amuſement to the *Tyro's*, but are nauſeous to the Grave and Thinking Part of the Pro-

Profeſſion. 'Tis an Undertaking which has employed the beſt Heads of all Ages: And I hope the Reader will do me the Favour to excuſe the Attempt by ſo barren a Capacity as mine is, for the ſake of having wiſhed well. I am not for coining fine-fram'd *Hypotheſes*, nor for advancing any thing which I dare not rely on as Fact, and *Such* as has been the Reſult of a patient Series of Obſervation for many Years; and, if I ſhould have added, of a ſucceſsful Practice, I believe I ſhould not want the Suffrages of ſuch as I have had the Honour to ſerve.

An Unuſual or Preternatural Heat along with a Frequency and Quickneſs of Pulſe, detect a Fever; though as to the immediate Cauſes of one, all are not agreed, as will appear anon, each liking to prate in a Jargon of his own, Α τὸ Θεῖον was the Language of *Hippocrates*; and 'twas a Frankneſs our later Hypothetical Gentlemen have not ſufficiently acquieſc'd in; where, however, the Reaſons given in, have little more in them, than alſo calling it a *Divine Cauſe*. This frank Manner would have ſaved the Practitioner much uſeleſs Enquiry after the Διότι of Fevers; and yet he would have been far from being left to Chance to have founded his Indications on; ſince in the Diſcovery of the Erring Motions of the Fluids he has his Senſes to rely on, to deſcry ſuch Symptoms as give Riſe to the different Proceedures, which is the Ὅτι we look for.

The firſt *Criterion* then by which we diſcover any Feveriſh Diſpoſition, is a Frequency of the Pulſe; and therefore the Motion of the Blood is ſuppoſed to be accelerated in Proportion to the Frequency of the Pulſation. However, the Frequency of the Pulſe alone does not conſtitute a Fever, 'till it degenerates alſo into a Celerity, which naturally happens when the Pulſe riſes to high Numbers. To aſcertain the Nature of a Frequency and

Quick-

Quickneſs, and their Difference, the *Space*, the *Ictus*, and the *Interval* of the Pulſe are to be well remark'd. By the *Space*, we judge of the Strengths of our *Laborant:* By the *Ictus*, we paſs a Judgment on the Modality of the Stroak or Pulſation; but in our preſent Caſe, whether it makes any Demurr on the Finger, which denominates it a ſlow Pulſe, or whether, on the contrary, it immediately recedes in a *Syſtole*, which gives it the Appellation of a quick Pulſe: And laſtly, by the *Interval*, we meaſure the muſical Time of its Return, which if ſmall, 'tis a frequent Pulſe. Hence Frequency and Celerity are eaſily diſtinguiſh'd in Notion, but not often too well in Practice.

We may, for Curioſity's ſake, ſee below, whether ſome extraneous and irritating Principles in the Blood don't give Riſe to this Frequency and Celerity, as alſo the unuſual Heat; and how well-grounded it may be to conclude from hence, that the Circulation is haſten'd in Proportion to the *Number of Impulſes*, as is a common Obſervation among ſuch as have conſidered the Laws of *Hydroſtaticks*, abſtracting from Reſiſtances, which are not the Buſineſs of this Head.

CHAP. II.

The various Sentiments about the immediate Cauſes of the Heat, and the Frequency and Celerity of the Pulſe in Fevers.

THE Ancients ſuppoſe a *Putrefaction* of ſome Parts of the Maſs; and that theſe appear in the Urine of Perſons in a *Criſis*, and paſs off by the Bladder and the Pores of the Skin in critical Sweats,

Sweats, and ſo determine the Struggle between Nature and the Diſeaſe, by the Load extirpated.

Others believe it conſiſts in a preternatural Fermentation; and that an Ἀμεθοσία of its Principles occaſions it; and that the Effects of this Fermentation are either *Diſſolution* or *Coagulation.*

Some place the Cauſe in a *Turbatâ Sanguinis Miſturâ*; for they find that the Urine generally is muddy before Concoction. And when it begins to drop a Sediment, there is Hopes of a Recovery; this being a Sign that Concoction is begun, and that, if we can manage well, Affairs may ſucceed.

Many believe an Acrimony of the Juices to give Riſe to a Fever.

Bernoülli has advanc'd, That the Breach of the Globules occaſions the Spilling of a venenous Air into the Maſs, and ſo diſturbs its Order.

Many more are the Opinions of Authors, which the Reader, if he delights in ſuch Diſputes, may take the Trouble to conſult at his Leiſure. But none have been ſo lucky as the Learned *Bellini*, whoſe Sentiments are confirmed by Practice: For the Pulſe is not vitiated but from the Vitiation of the Blood; and the Blood offends only in its *Quantity*, its *Motion*, or its *Quality*, in ſome or all of theſe.

The ſevereſt Mathematician never will nor can deny, that there are ſome peculiar Affections of Matter in the Maſs of Blood, which irritate more or leſs, and create or reſiſt Coheſion. The various Qualities the Secretions are ſtock'd with, are but the Conſequence of a material Pre-exiſtence of them in the Maſs. What are the odd *Phænomena* upon Mixtures, and their Effects, but the Reſult of theſe Qualities? How otherwiſe happens it, that we have known the Urine of a convulſive Perſon, burn the Shirt almoſt as readily as an acid Spirit? Many Inſtances are needleſs upon ſo evident a Caſe;

nay,

nay, I ſhall add that theſe very Qualities are the conſtituent Principles of Frequency in the Pulſe; and that their *Valores* encreaſe or decreaſe, as they are more or leſs active.

Among one of the moſt noted Qualities in the Blood, is its *Rarefactive Power:* For as all Fluids are more or leſs porous, and conſequently contain more or leſs Matter in their Bulks; ſo may they be rarefied in a *Ratio* to their *Denſities.* But the Blood being compounded of Globules including an Aërial Subſtance, muſt in the firſt Place, only touch in twelve Points, and conſequently have great Vacancies interſpers'd. Now if the Air be rarefied by Heat, or ſome other Accident; the Air without theſe Globules, and that which they contain, muſt expand reciprocally to the Rarefaction of this External Air, until they arrive at an *Æquilibrium,* which often happens in our Blood. even to a Rupture of the Veſſels: But alſo in the Blood there are certain Principles of *Heat* diſcoverable; for by the Torture of the Fire we find a large Quantity of an *Igneous* Subſtance, which our Chymiſts are pleaſed to term *Phoſphorus:* And ſince nothing is required to be mingled with it that may afford this Matter, therefore this Inflammable and Burning *Phoſphorus* is materially pre-exiſtent in the Maſs. And hence in Fevers we become hotter, becauſe there may be a larger Quantity of this Matter in the Blood. For thus we only follow the Footſteps of the moſt Ingenious and Learned Sir *Iſaac Newton,* who, accounting for the Effects produc'd by the Sun, ſuppoſes *it a great Body of Earth heated to a certain Period, and that all theſe Effects of Heat depend on its Fire.* I cannot, by a Parity of Reaſon, ſee a readier Way to explain Heat in our Blood, than to ſuppoſe (what is but Truth) that it contains Fire in it: What other is it than this Fire that cauſes the *Thermometer* to riſe to the ſame

Height,

Height, when applied to the Blood or Hand, as if it were Boiling Water? And if the Authority of the *Hebrews* or *Hippocrates* will add any Force to the Argument, the firſt call it דלקת השף קדחת all which we ſee ſignify ſomewhat belonging to *Heat* and *Fire*; and *Hippocrates* calls *in Morb. Epidemic.*, *Febris vehementiſſima*, Πῦρ, or *Fire* (*in ægroto ſecundo, nomine Sileno.*)

It may be objected, that the Serous Parts in the Blood would quite extinguiſh this *Phoſphorus*, and conſequently our Heat. If it be ſcanty, it does in effect often do ſo. Again, if we ſupply the *Decumbents* unwarily in Fevers with too abundant a Quantity of Watry Liquors, we find that, in Effect, it often does ſo.

But I ſee no Contradiction, to ſuppoſe that it may live in a humid, as well as the frigorifick Mixtures can even freeze Liquors into Ice upon the very Fire; or as well as Camphire flame under Water; as does Gun-powder blended with Charcoal, Sulphur, and Salt-petre. What Wonder then, that the Blood being a Fluid, being capable of Rarefaction, and having an innate Principle of Heat in it, ſo various and ſtupendous Effects ſhould be produced by it? What Wonder if the Moments ſhould encreaſe or diminiſh in Proportion to the Degrees of this Heat and Rarefaction?

Having ſaid enough to convince us that the Maſs of Blood is ſtock'd with Qualities of very various Natures, the Thread of my Diſcourſe leads me to aſſert, with the aforeſaid Ingenious and Learned *Bellini*, that there is nothing farther contained in the Blood, ſave its different *Quantities of Matter*, by which it fills the Veſſels to a certain Pitch, along with its *Degrees of Velocity*, which are but the Reſult of the more or leſs active *Qualities* contained in the Blood: And hence has the admirable *Newton* coin'd ſtanding Laws whereby to meaſure the

the Moments or Aggregate of Motion in moving Bodies: From him 'tis evident that the Degree of Celerity is but a Quotient of the Moment divided by the Quantity of Blood, which all know. The Increaſe of the Moment will haſten the Pulſations; for if 150 ℔. of Blood and Juices (which *Keil* ſuppoſes to be in a Body of 200 ℔. Weight) be the Quantity of Matter in the Veſſels, and the Degree of Celerity is equal to 2, then the Moment is 300; if only equal to 1, then 'tis only 150. Now ſuppoſe the Moment 150 gives 70 Pulſations in one firſt Minute, then the Moment 300 will give 140, which is called the *Coacervatus*; and I have found it in Perſons dying in a Fever; ſo that doubled Moments give doubled Pulſations. But whether 'tis poſſible for a Phyſician to diſcover by the Pulſe alone, that the Fever proceeds from the Addition of Matter, as from Drinking, or from the vitiated Qualities, (which, as I've ſaid above, are what give Riſe to the different Velocities) is not eaſily determinable. The Learned *Bellini* hints, that the *Magnitude of the Pulſe* ariſes from the Quantity, nay is reciprocal to it, when he tells us that *Momenta Diſſilitionum ſunt reciprocè ut Reſiſtentiæ à Sanguine*; from whence, in this Caſe, it might juſtly be inferr'd, that *Inflammatory Fevers*, from catching Cold (where the Quantity is encreas'd by the *Perſpirabile* obſtructed) or thoſe from Surfeits (where we are ſure of a vaſt Encreaſe, over and above the exotic Qualities ingeſted) may claim the Title of ſtrong and full Pulſes, if this Gentleman makes the Advance upon Experience. I may farther add, that as the Motion of the Blood is compounded of a direct and a lateral one (as is that of all Fluids,) it may be own'd that the Velocity wou'd drive the Blood to the ſame Space forward; but that the Quantity would not only drive it ſo far forward, but alſo farther outwards, and make the

Veſ-

Veſſels more turgid: Which ſeems agreeable to *Borelli*'s 60th Propoſition in his *OEconom. Animal.* p. 943. If theſe were Facts, the Diſcovery would be of Uſe to direct us in the *Species* of *Evacuation* with a ſeeming Dexterity: But 'tis much ſafer to ſtoop to Enquiries to aſſiſt us in judging, in which, Caution is a pardonable Fault; ſince I cannot practically aſſure you, whether the bare Encreaſe of the Velocity of the Blood's Motion will rarefy its Particles, and fill each Section of the Veſſels in an equal Degree, as if the Quantity had been really added.

From what is ſaid, this Corollary may be inferr'd, that the Maſs of Blood contains ſome unuſual mixture of extraneous Qualities and Matter, which makes its Motions irregular, and keeps it out of Order 'till it is ſeparated from it. 'Tis this which gives Riſe to all the Symptoms that, in Fevers, ſo grievouſly afflict our OEconomy. This Matter is contain'd in the Sediment, and is diſſoluble in the Urine; for when 'tis newly made 'tis tranſparent, and after Seceſſion may be made to reunite to it by any adventitious Heat, provided the Degree be of a certain Standard; which is a Conviction that a certain Degree of Warmth, in humane Bodies, is requiſite to a Separation; of which Experience is the propereſt Judge, and may in part be gueſs'd at from ill Symptoms ſupervening, over and above the Fever; and this is the beſt Standard of the Fever's Exceſs of Heat or Slowneſs. What hence may be deduced, is, that theſe Contents which take what Place their relative Gravity allots them, may either be *ſaline* or *ſulphureous* Bodies, or a Combination of both: Hence it is that Fevers, which are accompanied with a *violent Heat and ſtrong Pulſe*, diſſolve it too much, and the rapid Motions hinder its Seceſſion: And, on the other Hand, thoſe *with little Heat and weak Pulſes* argue that this Matter

Matter is too groſs and viſcid to paſs the Emunctories, and that the Spirits are too few for the Quantity; and thus it falls out, that neither way the Ferment precipitates.

I ſhall hereafter have Leiſure to ſhew, how Symptoms ariſing from the different Cauſes, give very different Views in the Cure, and that neither a Fever, nor its Symptoms, are to be handled by ſuch illiterate Perſons, who treat the Decumbents in a Road of trifling or dangerous Practice: And I hope to make it appear anon, that Symptoms are as the Fevers they proceed from; either from too violent or too weak a Motion in the Blood, forcing the morbid Particles upon a Part, or accumulating em on the Organs; for when they are Viſcid, their Trajection muſt be difficult. But when I ſpeak of too ſlow or too weak a Motion, I don't thereby underſtand that the Motion of the Blood is ſlower than in Health; for I have hinted above, that the ſloweſt Circulation in a Fever, is almoſt $\frac{1}{3}$d quicker than in a healthful Conſtitution; but 'tis meant with Reſpect to the Morbid Particles, which by this Motion, as failing of the juſt Standard, and a vigorous Propulſion, can never be excluded from the Maſs.

CHAP. III.

Of the two Generical Diviſions of Fevers, *and the Differences of them; with ſome farther Proofs of their immediate Cauſes.*

MAny are the Specifick Diviſions of Fevers, which I ſhall not ſtay to Dilate on now, but ſhall proceed to ſhew, that all Fevers that afflict us,

are no farther uſefully heeded, than as they are one of theſe two: And all the Cures of Fevers would be of no uſe, if we did not regard theſe Diviſions.

If we are ſeiz'd with a Fever, and if our Strengths are ſufficient, and the Heat be of a juſt Standard, the Morbid Particles will be gradually attenuated, ſo as to paſs the proper Emunctories of Separation in a due Seaſon, and the Fever will ceaſe in a longer or ſhorter time: But if the Blood be in any extraordinary Commotion, or be leſs active and warm than this Standard, then we either burn and ſcorch with *Cauſi*, or *Ardent Fevers*, or we are afflicted with *Hectical ones*, or ſuch as are much below the Standard for Separation; and theſe Extremes are the only Occaſion of all the ſupervening Symptoms, if we add ſome Qualities conjoin'd, from whence theſe Two Kinds have their *Eſſe*.

If the fiery and acrimonious Particles, then in the Maſs, be plentiful, with Regard to the Humid ones, the Blood will be hotter, and the *Ardent Kind* will hence ariſe; but if theſe Particles be overſtock'd with Serous and Humid ones, then the Fever is of the *Slow* and *Hectick Kind*. To give a perfect Judgment, how far they deviate from the Natural Heat, can no otherwiſe be demonſtrably determin'd, than by the Perſon's having often before ſuch a Seizure try'd with a *Thermometer* the Standard of their Natural Warmth; but this not being as yet practis'd (which yet I look upon to be a Fault) we can only keep the Patients at ſuch a Heat as that all Symptoms do abate or quite vaniſh; and only thoſe of the Heat, and Celerity of the Pulſe, remain.

This is the moſt uſeful Diviſion of Fevers for Practice, and ought to be the firſt Queſtion enquir'd after; ſince it is the moſt *General Guide* in all our *Indications*, and leads us to know, whether we muſt

Eva-

Evacuate, and in what *Manner*; as alſo what *Sort* of *Alteratives* are convenient, and what dangerous.

Under each of theſe Species are contain'd the *Intermittent*, *Remittent*, and *Continual*; which Laſt is ſubdivided into the *Malignant*, *Peſtilential*, and *Peſtis*; or, as ſome pleaſe to term 'em, *maligna*, *malignior*, *maligniſſima*, as only differing in Degrees.

Bellini reckons, that ſome viſcid Particles, ſticking in the Capillaries, produce a Fit, thus; When theſe *Particulæ frigorificæ* fix in the Extremities of the Arteries, then ariſes an impediment to Motion, whence ariſes a Senſe of Cold: But when this Obſtacle is ſhook off by the *Moment* of the Liquids preſſing on from the Heart, Heat, and laſtly, Sweats follow, which take off the Fit or Fever. But what may produce theſe *Particulæ frigorificæ* (or *viſcido liquidæ*, as he terms them) is not ſo evident; however, in *Act. Philoſophic. Lond.* N° 150. by a Mixture of Sp. *Æris virid.* and *Sang. human.* Dr. *Slare* produc'd ſo much Cold, as caus'd the Spirit of Wine in the *Thermometer* to ſettle, in Summer, almoſt to the Degree of Freezing; and this he thinks to be a pretty good Method of ſolving the *Phænomena* in the Cold Fits.

I am not ignorant, that ſome later Authors do deny any *Acid* in the Blood, tho' tortur'd by the ſevereſt Trials of the Fire, and conſequently do grant no Effects in the Blood from them: But firſt, *Vieuſſen*'s Experiment afforded a *Dram* of *Acid* more than the *Bole* cou'd have done; and every one knows, how capable an *Acid Spirit* is to produce ſtupendous Effects in the Maſs. 2*dly*. A *Saline Taſte* is not made without a Mixture of ſome *Earthy* or *Alcaline* Body; and a conſiderable Quantity is requir'd of this *Acid*, to make it taſte *ſalt*; ſo as *Spirit* of *Salt* ʒj. with *Sp.* of *Hart's-horn* ʒij. make a *Muriatick Taſte*, according to *Floyer*: Alſo Urine, as an *Acid Salt*, corrects the Bitterneſs of

Coloquintida: And Mr. *Boyle* precipitated, with a Solution of the *fixt Salt of Blood* in Water, a Solution of Fine Silver in *Aqua Fortis*; which is an Argument of its being of the Nature of Sea-Salt. Mr. *Boyle* owns the ſame Sort of Salt in the Blood: The *Bilis atra* makes Syrup of Violets Red; and Rheumatick *Serum* of the Blood, makes the Syrup Green; therefore the Blood is ſtock'd with Salts of different Kinds. *2dly*. Many of the ſecreted Humours taſte very *acid*, and produce all the Changes that *Acids* do when they are blended with ſuch Things as convince us of an *Acid* in a Mixture. Moreover, I ſhall add, that altho' there are plain Tokens of an *Acid* in *Spaw-waters*, where the Tincture of *Turnſole* is turn'd Red by 'em; yet *Du Clos* obſerves, that this Acid cou'd not be obtain'd by Diſtillation. From theſe few Arguments, then, I infer, that an *Acid* is really in the Blood; for I hope we will not deny our Senſes, which are the only *Criteria* we have wherewithal to judge on Medical Affairs. Hence then, it may ſafely be concluded, that *Acids are materially exiſtent in the Maſs:* As to our being ſupply'd with 'em, we can be at no loſs to know how; nor, by Conſequence, how our Blood can be Coagulated by 'em, ſo as to cauſe this Senſe of Cold in *Horrors*.

Another Difficulty yet remains; which is, Why we ſhould grow Cold only at ſuch certain Intervals and Diſtances, ſo regular, as if we were a Piece of *Machinery? Willis* looks upon a certain Quantity of the deprav'd Juices to be neceſſary to produce the Paroxyſms; and this he proves from the Poſſibility of haſtning or retarding the Fits, by Overfeeding, or Faſting. I ſhall not waſte my Time in reckoning up the various Opinions on this Head, but ſhall frankly deliver my own Thoughts.

Experience convinces us, that Fevers are not of equal Duration; And conſequently the Matter which paſſes

paſſes off Critically in the different Individuals, cannot be capable of equal Attenuation in equal Times, ſome requiring Four, others Ten, and many Twenty Days, or more, before the Matter is fully ripen'd, or the Fever comes to its Critical Period: This holds true in Continual Fevers: And ſince *Agues are but repeated Fevers*, we may conclude the Blood's mixture ſo very *Heterogeneous* as to contain ſeveral Quantities of this Matter, each of which has very different degrees of Coheſion, altho' it be the ſame *Species* of Matter; one Parcel of which is already fit for Excluſion; tho' another will not 'till to Morrow at the ſame time, or longer. Hence is the exactneſs of Turns, and the due Diſtance of Fits; hence alſo *Tertians* are often chang'd into *Quotidians*, and *vice versâ*. Hence it is we often have ſeen ſix or ſeven Fits, and no more; hence happens alſo its longer Duration, from a greater Quantity of theſe unequal Coheſions, that require exactly ſo many Circulations before their Maturation; ſo that if we ſuppoſe a Perſon to be ſeiz'd with a Tertian, and that the Quantities of Matter are expreſs'd by the following Letters, *viz. a, b, c, d, e, f, g.* let us now ſuppoſe the Particle *a* to begin on *Monday*, then the Particle *g* will produce a Fit on the *Saturday* Se'nnight after: If they are cur'd at *g*, then *g* has requir'd 15 Days Maturation, and therefore muſt *a* require the ſame too; hence it is that we are often diſorder'd for ſome Days before Fevers and Agues.

Having anſwer'd this Queſtion, I ſhall proceed to ſhew you how Fevers differ among themſelves in *Degrees* only.

An *Intermitting Fever*, (whether a *Quotidian*, *Tertian*, *Quartan*, or any other) begins with a Coldneſs ſeizing on the Region of the Loins, along with *Horrors*; the Nails grow blue, the Head aches with gravative or tenſive Pains, the Pulſe is

ſlow and oppreſs'd, and the Urine is clear without a Sediment: In the middle of it, comes on a troubleſome Heat, various and irreſiſtible Fancies infeſt us, the Pulſe grows quick and ſtrong, the Urine is reddiſh; a Thirſt and many other Symptoms ariſe. When the Fit declines, the Pulſe becomes undoſe and ſtronger, the Urine ſettles, they ſweat plentifully, all the Symptoms abate, and at laſt an Ἀπυρεξία ſucceeds; and then too, the Appetite returns, and we are now no farther in a Fever, 'till the Return of the Paroxyſm.

A Remitting Fever alſo begins with an *Algor* and *Horror*, after which they grow hot, with a quick and frequent Pulſe, various Symptoms come on; at the Decline of the Fit the Symptoms abate, the Heat leſſens, but never quite leaves us 'till the laſt Fit; the Urine ſettles, the Pulſe grows milder, and they ſweat: And thus ſeveral partial Attempts are made, till the Grand Decline.

A Malignant Fever begins too with a *Rigor*, if of the *Hectick* Kind; but a *Horror*, if of the *Ardent* Sort; after which, from the Beginning of the Fever to the total Decline of it, (for I here abſtract from conſidering it, as turning *Remittent* or *Intermittent* before it ends;) 'tis equable, and without any Paroxyſms; the Urine is clear or ſtrawy, the Tongue dry, brown, or black, with the *Aphthæ*; and the Spirits fail.

'Tis then plain, that all Fevers begin firſt with *Algors*, *Rigors*, or *Horrors*; after which come on afflicting Heats along with a Train of Symptoms; and at the Decline, Sweats or ſome Evacuation of equal Force to them, which abate the Fever or quite take it off. The Difference then is, only that in Agues the *Horror*, *Heat*, and *Sweat* terminate in few Hours in a perfect Calm, 'till the next Return. In *Remittents* the *Horrors* are only at the Beginning; the *Heat* is conſtant, but not equable;

equable; the Fits terminate in *Sweats*, ſo partial as only to abate, not extinguiſh the Fever 'till the next Return; and thus it continues decreaſing till the Grand critical Evacuation. In the *Malignant*, the *Algor* is not very remarkable: The *Heat* continues equable many Days; and what *Sweats* ſupervene at firſt, are ſometimes the Effect of the ill Regimen; but thoſe *Sweats* that come upon a digeſted Urine, after the State, are deciding, and terminate the Fever. The *Algors* are Arguments, of Sick'ning Nature; the *Heats* and *Symptomatical Sweats*, of her Struggle; but the *critical Sweats*, of her Victory.

From what has been ſaid above, and from what appears, it may be concluded, that if the Quantity of Matter or its Qualities (from whence ariſe the different Degree's of Velocities) were always the ſame, we never ſhould be affected but with one Sort of Fever; but as they vary infinitely, ſo do their Effects, and ſo do Fevers.

In the Beginning then of all theſe Fevers, the Principles, which conſtitute them, ſeem to be as yet in the *Ore*; and the Blood is ſo obtunded by this Maſs (and the Pulſe obſerves the Motion of the Blood) that the irritative Particles are not extricated but by reiterated Circulations; and then the Maſs begins to be more open in its Texture; then the Heart begins to be vellicated, and the Pulſe in Proportion grows quicker and ſtronger; the Skin grows hotter, (but much more ſo in the *ardent* than in the *hectick Kind*;) and at laſt (all at once, or by Degrees) whatever is noxious begins to be thrown off, and to be expell'd through ſome Emiſſaries, and then the Fever, of what Denomination ſoever, abates or ceaſes. The *Matter* and *Qualities* of the Blood which make an *Ague*, muſt be different from thoſe which conſtitute a *Remittent Fever*; and both muſt infinitely vary from what gives Riſe to *Continual* ones: But as it has been proved, that

nothing but the Quantity, Motion, and Quality can give Riſe to any of theſe; 'tis conſequential that their productive Principles only differ in Degrees.

Fevers then are properly divided into *Ardent* and *Hectical*, and they into *Intermittents*, *Remittents*, and *Continual*; (which are either *Malignant*, *Peſtilential*, or a *Peſtis*.) There are alſo Subdiviſions of Fevers, as *Hecticks* ſeem referrible to the *Remittent* Kind: And ſome may properly enough be term'd the *Neutral*, for they may belong to any of the Species, and they frequently do, (ſuch are the *Meaſles*, *Small-Pox*, *Raſh*, *Scarlet*, &c.) for ſometimes they become Epidemical and Peſtilential, as they have been for theſe ſix Years; and in other Years, they are left to the Care of the *Nutriculæ*.

Theſe Fevers are known frequently to change Hands with each other: So that what to Day is Continual, to Morrow may turn Remittent; nay, Intermittent, according to the Quantity of offending Matter, which is extruded: And, on the other hand, we frequently find that *Diaries*, by the wretched Miſmanagement of Pretenders, are too often heightned into ſome of the former; which ſtill plainly proves that all theſe Fevers differ only *ſecundum majus & minus*.

Of an Ephemera; *its Cauſes and Signs.*

I ſhall not dwell upon this Head, but ſhall ſhew you the Procatarctick Cauſes of them, in which the other Fevers ſhare in common.

Cold is the moſt common evident Cauſe of all Fevers; and the Pores being obſtructed by it, the Blood-Veſſels become much diſtended, by the Addition of the *Perſpirabile*, which may occaſion a larger Pulſe, in Proportion to the Quantity added; for *Cylinders* of equal *Altitudes* being to each other as their *Baſes*, a larger *Diameter* argues a larger *Baſe*, and a larger Quantity; and hence may happen a larger Pulſe.

Woody

Woody Places have been found to occaſion Sickneſſes, and particularly Fevers, from the ſame obſtructive Power: And the ingenious Dr. *Woodward* has, in the *Act. Londin. Philoſ.* given us a moſt accurate and laborious Account of the Reaſons of the Unhealthfulneſs of Woody Places, as in *America*, (particularly when our Plantations firſt ſettled.) For He having found by Experiments, that a Plant wou'd augment but as 1 to 46 (or 700) of Water; and that the Growth was to the Evaporation but as 1 to 46 (or 700). How Dampy then muſt a Place ſtock'd with Trees be, and how dangerous for Health? Under this Head is rang'd Moiſt Weather, which alſo leſſens the Air's Weight ſo much that the Blood muſt rarefy in Proportion, as has been ſaid above: Hence in *England* are we ſo Healthleſs.

The *Heat of the Sun* ſometimes rarefies our Blood into an *Ephemera*; but our Northern Climes knowing few labour from this Head, 'tis enough to have hinted at it, and I ſhall proceed to one more, nay, moſt common Cauſe of them, I mean an Exceſs of Drinking; which both adds Matter enough, and Qualities ſufficient to fire it into Commotions.

Moſt other Cauſes depend on ſome of theſe, and therefore I ſhall proceed.

The Signs of *Ephemera's*, are the numerical Symptoms which point out other Fevers; and I know no Difference, ſave the Duration, which I have ſufficiently prov'd to depend on the greater Exceſs of the Quantities or Qualities: For they begin with *gentle Rigors* and Heat; and all the Symptoms common to other Fevers, follow; and they terminate with Sweats: Sometimes they laſt only one, often two, ſometimes four Days. But the moſt diſtinguiſhing Sign which I know of, is, *That the Urine ſettles at the very beginning of them*; which alſo is common to Eruptive Fevers: But they are more-

over

over diſtinguiſhable by other collective Signs, and may be better gueſs'd at by them. *Sennertus* only ſays, *This Fever did not proceed from a Procatarctick Cauſe, therefore 'tis no Ephemera:* But he tells us he cannot argue *vice verſâ*. And *Walſchmidt* ſays, *We may gueſs it to be an* Ephemera, *or a Diary, if the Perſons were well conſtituted before the Seizure.* No Time nor Place is exempt from the Attack; for we have known them ſeiz'd in Bed, as well as out of Doors.

As to the Danger of a *Diary*, there is none; for it preſently terminates in a *Mador*: But Miſtakes or Miſmanagements cannot be anſwered for; and 'tis eaſy for it to be advanced, as I have ſhewed above, into even a Continual. *Vid. Coberi Decad. Obſ.* 1.

The Cure of it is ſo eaſy, that Phyſicians are ſeldom conſulted about ſuch Patients. However, if any are afraid, by the Violence of the Heat, and Strength of the Pulſe, along with Head-achs, that it may degenerate into a Συνεχὴς; or, if the Perſon ſeized be of an Athletick or Plethorick Habit of Body; *Bleeding* is adviſable to abate the too vigorous Motion, or to prevent Ruptures of the Veſſels, along with a *diluting* Diet of cooling Things: Such are *Oatmeal-Gruel*, *Panadoe*, thin *Broth*, *Sack-Whey*, *Poſſet-Drink*, *Small-Beer* and *Toaſt* with *Nutmeg*, *Wine* and *Water* with a *Toaſt*. *Claretum Coberi*, (viz. *Aq. font Cinnam. Sacch. coct. & per Manicam Hippocratis tranſcolat.*) And an Abſtinence from *Fleſh-Meat* till the Sweats carry it off.

If they are not burning, but rather *hectical*; warmer Diet may be allowed, to bring the *Fever* to a Balance, till they Sweat; ſuch may be allow'd Caudles of *Wine*, *Broths*, (but no *Fleſh-Meat*,) and even, in *Peſtilential* Caſes, *Wine*. [*River.*]

If

If they are infeſted with *Sickneſs*, either a gentle *Emetick*, or a *Cathartick*, are indicated, eſpecially if 'tis from Drinking or playing the Gourmand; or at leaſt a *Gliſter* may be adminiſtred to evacuate ſhare of the offending Matter.

Bliſters are of Uſe, if they are *Catarrhous* and *Hectical*; and that they may turn ſuch, whoever did ſee any Examples of our *Feverett*, &c. in 1712. can be at no Loſs to imagine or know this Truth.

In general; what is given in this ſhort Fever ought to be luke-warm, (if nothing contra-indicates;) becauſe, the *Criſis* being at hand, Perſpiration is to be promoted, and no Pore is to be ſhut up from being a Salley-Port to the *Perſpirable* retain'd. Whereas, if the Liquors are given cold, the Pores of the Glands of the Stomach might be obſtructed, and endanger an *Inflammation* of that, or ſome other Part; as is common to Perſons over-heated, and who immediately drink Water upon it.

Give me leave to remind you, that *Baglivi* is of an Opinion, that in the Cure of Diſeaſes, great Regard ought to be had to the Procatarctick Cauſes. *Si Febrim*, ſays he, *ex Inſolatione vel hujuſmodi externâ Cauſâ productam curandam quis ſuſciperet, nulloq; habito Reſpectu ad Cauſas procatarcticas; per præconceptam Recentium Medicorum Hypotheſin non tantum Febres verum etiam Morbos omnes ab Acido pendere, Alcalia volatilia uberiori Doſi præſcriberet, ut præſuppoſitum febrile Acidum infringeret; & per Diaphoreſin eliminaret, nonne profecto toto erraret Cœlo? Cum Ebullientis ab acceptâ inſolatione —— Sanguinis Motus Componendi potius ſint per amica Remedia, quam addendum Calcar per furentia Alcalia? Apparente Igitur, pro Diverſitate Cauſarum procatarcticarum & antecedentium diverſâ Facie, Cauſâ immediatâ & proximâ, in hauriendis Indicationibus Morborum ad illas ſemper reſpiciendum erit. Aliter enim*

enim tractare debemus Febrim ab Intempestivo Frigore aliter à Crapulâ, Venere, Insolatione, Animi Pathematis aliisq; Causis productam. And below, *Nonne Insaniret Medicus qui ardentem Febrim à nimiâ Venere productam eâdem Methodo Purgantium, Venæ Sectionis, &c. Aggrederetur, quâ Ardentes aliis Causis, Ortum debentes, aggredi solet.*

I am sorry to dissent from so learned and laborious a Person as *Baglivi*; but, *Amicus Socrates, amicus Plato, at magis amica Veritas.* Indications are to be taken from *Permanent Effects:* So that if the Cold has alter'd the Pores; if any Liquor has relaxed the Fibres of the Stomach, or over-crouded it; if the Sun by its Heat has curl'd the Fibres too much, or has straiten'd the Pores; if Venery has exhausted the Spirits; these Faults must be amended, because they are *Permanent Effects.* But it often happens that External Causes do produce such Effects in the Mass, as require the Use of that very Thing which gave Rise to them: As is frequent in *Dropsical* Persons, who are enjoin'd the use of Wine, when perhaps 'twas caus'd by that very Liquor: Cold Liquors drank by a Person over-heated, will often produce an *Inflammation* in the Stomach, which all know requires cooling Medicines: *Rheumatick* Pains often arise from the Rain wetting us thro' our Cloaths, which after proper Evacuations, we have known cured by the *Immersion* [the Ὑδρολασία, or Ψυχρολασία.] *Ardent Fevers* frequently depend on this individual Cause; and yet we must cool them. Many more Instances may be brought to convince us, that the *Procatarctick* Cause ought not to mislead *Practitioners* so far as to neglect any Remedy contra-indicated by the present Circumstances. *However, 'tis, generally speaking, helpful to judge of the Effects produc'd: But our Indications ought to be farther fetch'd, and from a surer Bottom than it,* I mean from the *Vitiations of the Blood and Fibres,* &c. which

which are beſt judg'd of by the proper Symptoms. Vid. *The Introduction.*

Of a Febris Putrida, *Remittent*, Συνεχὴς; *Hectick, and Intermittents.*

A *Synechès* is a *Fever* with *Remiſſions*, i. e. a *Fever* where there is conſtantly a *Febrile* Heat, (after the firſt Horror is over,) conſtantly a Quickneſs, and Frequency of Pulſe; but when the *Paroxyſm* or *Exacerbation* comes on, then theſe Heats encreaſe wonderfully more than in the *Remiſſion*, and then the Pulſe grows ſtronger and more frequent, and the Quickneſs is more perceptible. At this Time too, all Symptoms, whether *Pains*, *Fluxes*, *Vomitings*, or ſuch-like, recommence and revive. So that when the Fever continues, and yet the Blood ſuffers *Tides*, and ſhifts from ill to worſe, This we call a *Remittent Fever*, or a *Synechès Putrida.*

As I have hinted above, it may either be of the *Ardent* Kind, or of the *Hectical:* For if, in the Fit, the Heat be very violent, and the Pulſe very large and ſtrong, Bleeding is abſolutely neceſſary, and ought to be proportion'd to the Strength and Age of the Patient, nay, and muſt be reiterated, if Occaſion requires it. And I ſay of the *Remittent* Kind, as Dr. *Cole* ſays of the *Intermittent*, that Blood ought to be taken away in the *Paroxyſm*; for then we can beſt judge of the utmoſt Heat, and may better proportion the Evacuation thereby.

After which you may give all the Diluent and Acid Remedies to cool the Blood, and ſo to impede its too rapid Motion, that it may not endanger *Inflammations* or *Hæmorrhages:* And thus you prepare a readier Way for the regular Dropping of a Sediment, and to a Deciſive Sweat: Or if a *Remiſſion* happens, which is not ſo eaſy to obtain at firſt, in the *Ardent* Kind, when it happens diſtinguiſhably, then

then give the *Cortex Peruv.* at due Diſtances and Doſes, and continue it to a perfect Ceſſation of the Fever. In ſuch Fevers the Patients may ſit up often in a Day, or in Bed.

I know ſeveral Practitioners, who upon the Complaints of *Faintneſs*, heap upon their Patients Cordials of a Warmer Kind. 'Tis true, as will appear more at large hereafter, that *Deliquia* may require, for the preſent, warmer Cordials: But a *Faintneſs* being only a Diſpoſition to a *Deliquium*, ought to be handled in theſe Kinds of Fevers by leſſening the Cauſe of them; and by theſe Medicines you are ſo far from helping this, that it will be found deſtructive, by cauſing an over-bearing Motion; and by over-diſtending the Veſſels, you would cauſe very diſmal Symptoms.

You muſt then give them, in their ordinary Drink, ſome Drops of *Sp. Sulph. Vitr. Nitri Dulc.* alſo *Syr. Limon.* or any other Acid, to ſuch a Quantity as may gratefully acidulate the Small-Beer, Barley-Water, Wine and Water, or any other ſmall Liquor, by which you calm this violent Commotion; and at laſt the Urine, by this Management (for I am now only talking of the Cure, without conſidering the noble Effects of the *Cortex*, and which I believe no Practitioner ought to neglect), will ſeparate; and then, and not till then, if Occaſion requires it, venture upon a little thin Broth, ſo far as to ſupport, but not to heat 'em, till a regular *Criſis*. Though I have often known lucky Miſtakes at the State, by drinking ſtrong Liquors; yet this cannot be drawn into a Precedent by prudent Men, ſince there was no equal Chance for ſo good an Event.

If the Pulſe be weak, and the Heat be moderate, both in the Paroxyſm and out of it, all we can do, (*after proper Evacuations premiſ'd*) is to give the *Teſtaceous* Medicines, to advance the *Febrile* Heat to ſuch a Degree, as Experience makes it evident a

Criſis

Criſis will follow; to adminiſter gentle *Cordials* and *Alexipharmacks* to ſupport the Spirits; and alſo to apply *Bliſters*, to rouze the drooping Circulation, to evacuate the *Serum*, and to revulſe it from the Head.

If I ſhould here undertake dogmatically to aſſert the Manner of the Operation of *Teſtaceous* Medicines, I ſhould hazard to anſwer a difficult Queſtion. 'Tis doubted however, and not without ſome Reaſon, that they ſeldom paſs farther than the Stomach and Inteſtines: And if we conſider, that though theſe Powders are reduc'd to be impalpable, and 'till they can be broke into no *larger Surfaces* phyſically; yet if we then mingle them with *Cordial Waters*, nay, with *Syrups* or *Oils*, (which buoy them better up,) they will in a very little Time ſubſide. Which makes it probable, that this Sort of Medicines ſeldom mounts up to the Thoracick-Duct. And accordingly I have found them lodg'd in the *Receptaculum Chyli*, in a Perſon under an *Empyema*, who, by the Preſcription of a Great Man, had taken plentifully of them; and they had harden'd into ſo ſtony a Matter, that I was ſome time e're I was ſatisfied what they were; for what the Knife would hardly enter; in a ſmall Time, diſſolv'd and ſubſided in the Water.

If there were no Difference between the relative and abſolute Gravity, or if there were no Reſiſting *Medium*, it would be eaſily granted that Pearl would ſettle preſently; but as the Mathematicians ſhew us, there are *Such*, and that a Body gravitates with its Exceſs of Gravity above the Lighter: Let us then ſuppoſe with them $x+y$ to be the Heavier, and x to denote the Lighter; then $\frac{x+y}{x}=y$: Thus it is, that Mercury is ſpecifically heavier than Water, as 14 to 1; therefore it gravitates by an Exceſs of 13; thus

thus Pearl is to Water as 2, and 51 to 1; therefore it gravitates with an Exceſs of Gravity of 1 and 51 above Water. Enough of this may be ſeen in Dr. *Wallis*, *Pere Thomas*, and *J. Rohault.* p. 194. *Part* 1. *c.* 16. *De Corps durs plongez dans des Liqueurs:* We will add to this, *That the Reſiſtance to Deſcent encreaſes, upon dividing a Body into larger Surfaces*; ſo that Gold-Duſt itſelf will ſwim for ſome time. It is upon this Head, that theſe Powders are long a ſettling to the Bottom: Hereupon I muſt frankly own, I hardly believe they ever reach the Blood; for that we ſee they are never pulveriz'd ſo fine, in the Shops, as that the Reſiſtance of the Fluid, becomes near equal to their abſolute Gravity: Hence, before they paſs from the Stomach, they *(from this great Diſproportion)* ſubſide, and are carried through the Common-ſhore of the Inteſtines.

It may then with Reaſon be asked, How Steel, Mercury, and ſuch heavy Bodies produce their Effects in the Blood? We are certain that wonderful Effects are produced by theſe Medicines given Inwardly. 'Tis not ſufficient to ſay that the Gravity of the Fluids increaſes upon the giving theſe Medicines; becauſe I know no Trial, as yet, made on theſe things: Indeed, where they may be diſſolved in the Stomach, or Liquids taken, I find no Difficulty to yield they do; nor do I here talk of particular *Menſtruums* that can make 'em liquid; and the Tincture drawn by the Juices of the Stomach from theſe Medicines, may be one Cauſe to produce theſe ſtupendous Effects, by the ſame Mechaniſm known in *Menſtrua.* Moreover, without pronouncing, we may probably ſay, that perhaps theſe Medicines rob the Contents of the Stomach of their offending Acidities, as we ſee they do in Vinegar; and theſe Contents conſtantly taking Journey into the Maſs, may thus prevent future, and diſſolve the preſent Combinations which prove a Bar to ſuch a Motion

as

as will be ſufficient to throw off what is noxious, and ſo are preparatory for removing the Obſtacles that hazard a good Separation; and thus they eventually contribute to a *Criſis*; for the Juices of the Stomach being impregnated with them; they, thus chang'd, may invigorate the Fibres and the Blood's motion, and ſupply Matter for Sweats; or perhaps, the active Principles being far divided by too great a Quantity of *Serum*, they may abſorb ſo much of *It* as to make 'em attract each other more forcibly; and thus the Blood will move on in a juſt Tenour of Motion, and exclude the noxious Particles thro' the Pores. But it is trifling to enquire ſo nicely into theſe Particulars, which may remain Secrets never revealable, and therefore I ſhall proceed.

The Remedies are the following: *Pulv. Margarit. oc. 69. Bezoar oriental. occidental. mineral. Lap. de Goa, Contrayervâ, Antim. Diaphoretic. Echel. C. Corn. Cerv. Calcinat. Corall. Rub. Cinnabar. Nativ. artificial.* and ſuch-like, which are to be varied according to the Patient's Palate.

℞ *Pulv. Marg. ppt.* ℈j. *Oc. 69.* ℈ß. *Bez. orient. gr.* vj. *Conf. Alcherm. ſine Moſch.* ʒj. *Syr. Caryoph. q.ſ. m. f. Bol. quem repetant intra Horas 5, vel 6. ſuperbibendo Cochl.* iv. *Julap. cujuſvis Perlati.*

℞ *Pulv. e Chel. C.* ℈j. *Sal. vol. C.C. gr.* j. *Conf. Alcherm. ſin. odorat. vel Theriac. Androm. (modo nullo Symptomate Comotoſo contraindicetur)* ʒß. *Syr. Aurant q.ſ. m. f. Bolus capiendus ut ſupra.*

The Practitioners in *Holland* make much Uſe of *Antimon. Diaphoretic.* in their Bolus's; for they, living in low and wet Grounds, may make freer with fiery Abſorbents than we dare.

℞ *Aq. Lact. alex.* ℥iij. *Meliſſ.* ℥vj. *Menth.* ℥ß. *Epidem. Ceraſ. n.* ā ℥j. *Marg. ppt.* ʒj. *Sacch. Cryſtal. q. ſ. m. f. Julap.*

℞ *Aq. frigid. Saxon.* ℥iij. *Borrag.* ℥iv. *Cinnam. h.* ℥j. *Conf. Alcherm.* ʒj. *Marg. ppt.* ℈ij. *m. f. Julap.*

℞ *Aq. Fragor. Ulmar.* ā ℥iij. *Theriac. ſ.* ℥j. *Scord. Comp.* ℥ß. *Syr. Aurant.* ℥ß. *m. f. Julap.*

After we have given theſe, or ſuch-like, for ſome time, and by 'em have rais'd the Pulſe, recruited the Spirits, invigorated the Motion, and advanc'd the *Heat* to a *ſufficient Degree*, 'tis then our Buſineſs not to Tamper farther, but to keep it up to this Pitch, without letting it fall or riſe, till the *State*; when the happy Minute comes to diſmiſs the Fever through ſome of the uſual Outlets, and thus reinſtates us.

After the Adminiſtration of theſe Medicines, 'tis pleaſant to obſerve the Varieties of the Pulſe and Urines; for as the one advances to a juſt Pitch, the other changes at the *State*, from Turbid, Milky, Thick and Muddy, to a good and laudable Sediment; and the Symptoms in Proportion to this, vary, and either diminiſh or ceaſe.

Some *Fevers* are of a *mix'd kind*; for at *firſt* they have weak Pulſes, and moderate Heat; and yet a *little after* they turn *Ardent*, with *Phrenzies*: We may gueſs at ſuch *Fevers* from theſe *Collective Signs*, *viz.* Surfeits, Youth, an *oppreſs'd Pulſe*, (*viz.* ſometimes Great, ſometimes Small; now Weak, then Strong; now Quick, then Slow;) a particular Warmth beyond the Standard; violent Headachs, Red Eyes, a Sanguine Complexion, Red Urine, a *Plethora*; a ſtrong *Locomotive Faculty*; and

from

from this, that nothing has preceded, that could Weaken; and *upon theſe Accounts we may venture to make Uſe of Evacuations by Bleeding, and what is indicated beſides, as above.* I much fear the Neglect of underſtanding this Matter, has given Occacaſion to many fatal Miſtakes.

This may farther be added, that Putrid Fevers are not Mortal, 'till they turn Continual, which however, any Miſmanagement will eaſily do; and therefore prudent Care ought to be taken at the Beginning, that *Proper Evacuations* then be made, the neglect of which, they too-too often ſuffer for, in the Progreſs.

As to the Adminiſtration of the *Cortex Peruvianus* in theſe Fevers, no Body ought to be ſtartled at *Baglivi*'s ill Character of it; for it as certainly Cures *Remiſſions*, as *Chalybeates* do a *Cachexy*; but I hope no one expects an infallible Remedy: And as it is not uſeful in the *Ardent* Kind at the Beginning, more than 'tis in a *Malignant*; ſo he may ſpeak the Truth in crying it down in *Italy*, if their Fevers are always *Ardent*: But if Experience be a ſufficient Argument to reject it; the ſame will be Proof enough to retain it. In ſhort, if the *Cortex* be well choſe, if it be given regularly, and to a due Quantity, there is not a nobler Remedy in the World, for all Remittents, hitherto: Indeed if we fail in any of theſe Heads, I don't much wonder if the Succeſs be proportionable. I have in this far'd, as many of the Faculty have done; and upon a Change, have ſucceeded accordingly; but in none more conſpicuouſly than in the Eldeſt, and then only, Son of the Right Honourable the Lord *W——n*; who being ſeiz'd with a *Synechis*, with very fair *Remiſſions*, in which he was *Comatous* in the Fit, with an Augment of his Heat, and a quicker and ſtronger Pulſe: After ſome Evacuations, before my Arrival, I gave him about ℥vj. of it, (which to a

Child of Eight Years, was a large Quantity) to no Purpoſe; but finding his Remiſſions darker, I ſuſpected the Age of the *Cortex*, and therefore I ſent to the Apothecary for a Quantity to chuſe on, which he and myſelf pick'd; He powder'd it, and 'twas given to ℈j. at a time; the Fits immediately return'd ſlower; and with ʒij. or little more, they went off quite, to the Pleaſing Admiration of the Family, and a Conviction of the Cauſe; which I here the rather take the Liberty to mention, becauſe a Gentleman of the Faculty of our own Nation, ſeems, in a Tract, not to value, whether it be Putrid and Annoſe, or not; which is evidently a great and dangerous Miſtake. I ſhall only take the Liberty to annex one Hiſtory more, tho' 'tis now ſelf-evident, by every Practitioner's Obſervation, how uſeful it is. I was call'd to a Gentlewoman who had a *Vertigo*, a quick Pulſe, and Heat upon her; ſhe was Vomited by her Surgeon with *Vin. Benedict.* and *Sal. Vitriol.* (after 8 Ounces of Blood drawn off:) The following Day, (*June* 4. 1701.) I was call'd in; and found her vomiting every thing ſhe took; her Pulſe was weak, tho' quick; her Heat was moderate, and her Urine red. I order'd her Stomach to be waſh'd farther with Chicken-Broth, and then to take a *Pearl Julep* to relieve her Spirits, and at Night preſcrib'd her *Riverius*'s Mixture of *Succ. Limon.* and *Sal. Abſinth.* After which, ſhe Vomited no more, but ſlept quietly. The 5th in the Morning, ſhe was much Refreſh'd, and her Pulſe was not quite ſo weak. In the Afternoon her Vomiting return'd, and her Spirits were much depreſs'd (as was evident from her weak Pulſe and Swoonings.) I order'd the Repetition of the *Ant-emetick* Mixture; and a *Pearl Julep* for her Spirits, with a little *Treacle-water*, *Aqua Lact.* and now and then if Faintneſs urg'd, ſhe was to take 10 *Gutt.* of *Sal. Vol. Oleoſ.* in the Julep. The 6th,

the

the Vomiting ceas'd, and then a Head-ach came on violently, with her Pulſe wonderfully ſtronger; inſomuch as I judg'd it neceſſary to take away ſome Blood, (℥vj.) and thus I obtain'd a Remiſſion; upon which I gave her ℥iv. of the Decoction of the *Cortex*, and continu'd its Uſe every 4 Hours in the Remiſſions; (and if ſhe were Fainty, that ſhe ſhould take ſome *Sal. vol. oleoſ.* in the Julep, for her Pulſe then fail'd.) All that Night ſhe ſlept very well, was free from her Head-ach, but was not without a Heavineſs. The 7th, ſhe begun to regain her Appetite, her Urine began to drop a Sediment, her Temper grew Natural, but yet her Pulſe was Feveriſh, and therefore I continu'd repeating the *Decoct. Febrifug.* in the Remiſſions. The 8th, her Temper, Pulſe, Urine and Appetite, began to return. The 9th and 10th, ſhe, (tho' ſhe Vomited the Decoction) upon Repetition, grew well. I repeated it within 10 Days, as is uſual, and ſhe now, which is 17 Years ſince, continues Healthful.

More Hiſtories, in Vindication of the *Cortex*, wou'd prove too tedious to any common Practitioner, ſince daily and undeniable Experience convinces us of the Truth here laid down; but I muſt take Notice firſt, that, if they are not called in too late, they ought to Bleed, Vomit, or Purge, (with *Lenients*), before its Adminiſtration. As to the giving it by Glyſters (according to *Helvetius*'s Method), 'tis very uſeful, in Children eſpecially, who nauſeate its Taſte, and ought to be given to them to ℥ß. or more at a time out of the Fit, but to ℥j. in Adults; and after one is rendred, it muſt be repeated till the Fever goes off.

I ſhall moreover add, that I have found this Repetition uſeleſs, if while you are uſing the *Cortex*, you give a much larger Quantity than what will do. I ſhall therefore proceed to the *Hectick*.

COROLLARY.

From the Affinity there is betwixt a *Remitting* Fever and a *Hectick*, I take the liberty to ſubjoin it.

The *Hectick* has its Exacerbations as a *Remittent* has; the Sick never want a Heat, tho' it abates at certain Times, as in the *Syneχùs*; but then the Blood is overflock'd with an Acrimony of a particular Stamp; the Sweats that come on, do (as in the *Syneχùs*) abate the Heat; yet ſtill the Fund being almoſt inexhauſtible, they never can throughly exterminate the Matter; for the Fits are renew'd afreſh, and the Sick are drain'd, and die in a *Maraſmus*. This is call'd *Hectica Simplex*: The Cauſe is frequently in the Parts, and then 'tis a *Syptomatical Fever*, and this is common in Conſumptions. I have ſeen it after the *Small-Pox*, from Scales lining the whole *Inteſtinal Canal* (of which in *Sect. de Cholerâ*,) and this is call'd *Hectica Putrida*: Indeed, Hectical Perſons have no Horrors, as in the *Syneχùs*, but often complain of a Chillineſs: However, 'tis with Reaſon annex'd to a *Syneχùs*, becauſe of its *Exacerbations* and *Remiſſions*: But in *Hecticks*, theſe *Exacerbations* and *Remiſſions* are generally after Meals, when they have a ſharp Heat on 'em, a frequent and quick Pulſe; and *Sweats*, *Diarrhœa's*, or *Urine*, hurry 'em into an *Atrophy*. *Floyer* obſerves the Pulſe to have 100 Stroaks out of the Fit, and 120, in one.

As to the Cure, the *Pulſe*, *Heat*, *Acrimony*, and *Shifting*, in the *Hectica Simplex*, muſt direct us: And in the *Putrida*, the Nature of the *Inflammation*; and the *Obtunders* are neceſſary in both.

In the *Simplex* then, after *Bleeding*, (if their *Heat* be great, *Pulſe* ſtrong, the *Hectick* is juſt beginning, and their *Strengths* do allow of it) we muſt make uſe of ſuch Remedies as will *obtund* and *correct*

rect the *Acid Acrimony*, ſuch are all *Slimy*, *Watry*, and *Teſtaceous* Medicines, a *Milk-Diet*, *Steel-waters* of the lighter kind; the *Decoctions of Ivory*, *Harts-horn*, *China* and *Sarſa*: Willis *de Phthiſi* uſes this; ℞ *Lign. Sanct. (in Conſtitut. Phlegmaticâ aut frigidiore) Rad. Sarſap.* ʒiv. *Chin.* ʒij. *Santal. alb. rub.* ā ʒß *Raſ. Ebor. C.C.* ā ʒiij. *ſ.* a. *Infundantur & coq. in Aq. font* ℔viij. *ad* iv. *addendo Liquirit.* ʒvj. *Paſſular. Exacinat.* ʒjß. *pro Potu ordinario Conſtanti & aliquandiu ſumantur. Cheſneau in Capite de Phthiſi, Obſ.* 1. has the following *Decoction.* ℞ *Chin. in Taleolas inciſæ* ʒij. *Pulmonariæ* m. j. *Infund. Chin. per Noctem ſupra Cineres calidos in Aq. font.* ℔vj. *mane injice Pulmonar. fiatque Decoctio lentâ Ebullitione ad tert. partis Conſumptionem. Colaturæ add. ſacch.* ʒij. *& Cinnam.* ʒij. *pro Potu ordinario.* A Great Man fram'd a Decoction like theſe, and cry'd it up as a Secret to his Patients. The Diet ought to be ſuch as conſiſts of the like Particles; ſuch are *Puddings*, *Gruels*, *Milk-meats*, *Rice*, *Avenacea*, ſome *Freſh Fiſh*, (Aſelli) *Crabs*, &c.

After the Blood is well Corrected, give the Powder of the *Cortex* to a Dram, thrice a Day, to abate the Fever-fits: Theſe Medicines continu'd for ſome time, with the uſual Cautions, will have their deſir'd Effects, as I have frequently experienc'd.

Immerſion in cold Water, which is lately reviv'd, is alſo very good in this Caſe, if the neceſſary Cautions be obſerv'd, (*viz.* not to venture on it, if any *Viſcus* labours under an Incurable Diſorder, or be faulty; not immediately after a Debauch; not in Defluxions, nor in weak Perſons;) you may ſtay in the Bath a good while, the Deſign being to allay the Heat.

But as to the *Putrid Hectick*, repeated *Bleeding* is neceſſary in beginning Conſumptions, for then, all know, it depends on *Tubercles*, or the *Glands* of the Lungs Inflam'd; and then too 'tis neceſſary to

give all the Obtunding Medicines, as in the *Hectica Simplex*; moreover other Indications ariſe from the Nature of the Caſe, ſuch as giving *Opiates* at Night, to allay the violent Irritation of the Cough; *Iſſues* are made to revulſe the Humours; *Bliſters* are applied for the ſame End. But this Diſcourſe belongs no farther to this Head, and therefore I ſhall paſs on to the *Intermittents*.

Intermittents are cur'd in the ſame Manner as *Remittents* are, with Regard to their Shifting: But 'tis obſervable, that without due Evacuations made, the Fever is apt to return; nay, if the Blood be remarkably out of Order (as it often is in ſome *Tertians*, but more-eſpecially in *Quartans*); and if it is not amended too, the Ague often returns, nay, and even ſometimes cannot be taken off at all by the *Cortex*, till this State of Blood is very well chang'd and corrected. After proper Evacuations, (and Corrections, if requir'd) give the *Cortex*, from ℈ *gr.* to ʒj. at a Time, every 4th Hour, during the Interval of the Fit, till it returns no more: Thus, all Agues (whether *Quotidians*, *Tertians*, *Quartans*, or others, compounded or ſuppos'd ſo to be, of theſe) are carried off, unleſs ſome *Idio-Syncraſy* intervenes; for then you muſt, inſtead of the *Cortex*, ſubſtitute ſome other *Antefebrile* Medicines; ſuch are, *Miſtura Dekkeri Antefebrilis* (*viz.* ℞ *Cort. Lign. Guaiac. Fraxin.* ā ʒj. *Extract. Rad. Angel. Gentian. Antimon. Diaphor. Sal. vol. Sal. armon.* ā ℈j. *Myrrh.* ℈ij. *m. f. pulv. divid. in Chart.* N°. viij.) or *Pulv. febrifugus Fulleri* (*viz.* ℞ *Sal. abſinth.* ʒß. *Antim. Diaph.* ʒj. *Flor. Chamom.* ʒijß. *f. pulv. pro* 8 *Doſibus.*) Many have cur'd Agues with *Allum* ℈j. *and Nutmeg mix'd*, and given every 4th Hour, (the Nutmeg, *in Ration. Aluminis Subduplâ.*) I ſuppoſe *Wainwright* commends *Serpentaria Virgin.* to be us'd with the *Cortex*, as *Bates* does in his *Pulv. febrifug. cert.* which may do well, eſpecially if we want Correctors of Crude Humours:

Humours: The *Decoctum amar. alterans*, is alſo commended: But if the *Cortex* will do, why ſhould we have Recourſe to Medicines that fail a hundred times where the *Cortex* fails once?

As to the Reaſons of the Operation of the *Cortex*; 'tis Trial convinces us, that if you Bleed on it, the Blood will not Coagulate; ſo that if the other Medicines, *v. g. Oc. 69. Sal. armon. Sal. abſinth*, and ſuchlike, can hinder the Coagulation of the Blood, and are given in theſe Intermiſſions; we may conclude, without the hazard of being reckon'd haſty in our Opinion; that what can hinder the coagulative Principle of the Blood, can ſtop the *Rigors*, can occaſion an equal Protruſion, can interrupt its Shifting, and occaſion it to move on in the ſame Tenor as in Health, and can prevent a Fit, altho' Contraction of the Veſſels and a Precipitation of Humours cure Agues alſo: However, *I always talk with reference to proper Evacuations, to be premis'd, if poſſible, as well as proper Alteratives, if Time be allow'd us to act*; but Prudence will dictate its immediate Adminiſtration, where 'tis not in our Power to proceed ſo regularly, for fear of the Loſs of Time.

Of Continual Fevers.

Having now ſpoke of all Fevers that ſhift, and which either Intermit, or Remit, I ſhall ſpeak of the *Continual* ones, (*Synochoi*;) by which I mean Fevers that are always the ſame, that never ſhift; the Patients are not better or worſe, they have no Exacerbations or Remiſſions; their Pulſe, Temper and Order is equable, and the Blood always moves on in the ſame manner; and as theſe argue a plenty of *μίασμα νοσερὸν*, ſo are they of much worſe Conſequence than any of the former, and prove too often fatal: And as in the foregoing Paragraphs, I have prov'd *Them* of two Kinds; ſo is the one Sort of more fatal

fatal Conſequence (*generally ſpeaking*) than the other; for 'tis more hazardous to labour under a *Penury* of Spirits, than too burdenſome a *Quantity*. Hence *Galen* ſays, *Ex Repletione Convulſio Sanabilis eſt per Evacuationem: Ea vero quæ fit ex Inanitione & Nervorum Siccitate non facilè admittit Curationem*; which Sentence exactly quadrates with what may be ſaid of our different *Synochi*.

It muſt then be allowed, becauſe all Practice confirms it, that Continual, as well as other *Fevers*, retain either to the *Cauſus*, or the *Hectick*: They in the more Southern Parts of the World, and nearer the Line, are more ſubject to the *Former*, and we Northern People to the *Latter*, (at leaſt moſt frequently). And hence it is, that in thoſe Parts they frequently die in two Days, nay, often in four and twenty Hours; for that the Blood ſo over-ſwels its Limits as to rend the Veſſels, and occaſion either *Hæmorrhages*, or *Effuſions* into the *Cavities*. *Galen. de Method. medend. L. 9.* expreſſes the Method of Cure thus, *Continentium*, (and the ſame holds good in *Continuals*, and even in the *Peſtis*, according to Dr. *Sydenham*) *Febrium Præſidium maximum, ſi modo Vires valentes ſint Sanguinis Diminutio vel uſque ad Deliquium Animi ——: Ubi horum (viz. valida Virtus & Ætas) alterum haud ſatis reſpondet; ſatius eſt, quantum ſatis viſum fuerit, tantum Principio detrahere: Quod defuit, Iteratione ſupplere.* This Method they follow much in the warm *Iſles*, till they have brought the Motion within compaſs, as I perceiv'd from a Relation of mine, who had lived for ſome Years upon them; and at the ſame time they adminiſter all the Cooling Medicines to allay the Violence of the *Fever*; after which, they give the *Cortex*, if it turn *Remittent*: And thus they Cure theſe *Fevers*. The *Turks* in their Plagues uſe *Lemons* plentifully. And *Wecker*, ſpeaking *de Limoniis*, ſays, *Item & ad Peſtilentes Febres & eas quæ Con-*

Contagione non vacant, Febribus acutis & Contagioſis mirè ſuccurrunt.. Which demonſtrate to us, that they labour under the *Ardent* Kind: and our *Sydenham*, ſpeaking of the *Peſtis* reigning in *London* in 1666, ſays,—*Febris ardens uſitata Symptomatum Συνδρομῇ ſtipata indeſinenter Ægros divexat*; he treated 'em with Bleeding to large Quantities, 'till he ſeem'd to be blam'd for the Want of Succeſs in ſome few. So that, from Authority, we conclude, that when a *Continual* Fever ſeizes any Perſon with the Symptoms of *Ardency*, 'tis too plain to want farther Proof, that *the Cure is accompliſh'd by Bleeding and the Cooling Methods*, in Proportion to the Neceſſity.

They who labour under the *Hectick Malignant*, *have a depreſs'd and weak Pulſe, and their Heat is not very perceptible.* If the *Fever* is accompany'd with a *depreſs'd Pulſe* from its firſt commencement; the Phyſician ought to be very circumſpect as to the *Evacuations* which are to be made; for *ſome are always then neceſſary*; and which of 'em are moſt conducive, you will be well inform'd of, in the *Recapitulation*: But ſuch who have labour'd, for ſome Time, under this Condition, and have thereby become *languid*, *comatous*, and *weak*; 'tis not, in this Caſe, very likely that Nature, (pardon the Expreſſion) will ever free it ſelf of its Boſom Enemy (the Putrid Particles,) or ever exterminate it thro' any Part: And thus the poor Patient labours under a Train of ill Symptoms, which take their Riſe from the moſt dangerous Cauſe in a Humane Frame; I mean, an Exhauſtion of Spirits in the Brain; for now *Subſultus Tendinum*, *Coma's*, *Catchings*, *Gatherings of the Cloaths*, *Dry* and *Black Tongues*, *involuntary Effuſions* of *Urine* and *Fæces*; the *Pulſes obſcure* and *formicant*; and *Pulſus coacervati* come on, and uſher in Death. In this Caſe the Affair ſtands thus: As the Paucity of Spirits are con-

concluded on from theſe foregoing Symptoms; ſo 'tis certain that the Circulation will, in Proportion, be much retarded, and every Evaneſcent Artery or Capillary will be a Bar to its Motion, which the Quantity of Spirits cannot ſurmount; for now they fail to be ſo denſe: So that the Trajection thro' the Veſſels ceaſes, the Stroaks of the *Embolus* begin to be too feeble to propell the Liquids in the Veſſels to the Extremities; and thus at firſt the Blood will ceaſe to move in them, and the Pulſe will not be felt to beat, ſo that Death has begun there; for *when the Immitting Force cannot conquer the Reſiſtances, there is no Circulation*; and where the Circulation ceaſes, there is no Life. And as each Moment draws off Spirits that are never ſupplied, no wonder if the Fluids ſtagnate gradually higher, 'till at laſt the Blood in the Heart ſtagnates too; and then arrives that diſmal Moment when the Thread of Life is cut.

They whoſe Fortunes will not allow of a regular Phyſician to attend them in the Courſe of a Fever, at theſe laſt Minutes call them in to be Witneſſes of this *Cataſtrophe*, when God knows how little remains to be done: For, notwithſtanding all your Endeavours, the Blood, in ſome Perſons, can never be made to keep on the Circulation. Whether, at this Time, the Blood it ſelf grows ſo groſs, as not to yield to any, even the ſtrongeſt, Shocks of the Fibres to propell it; or whether now the Fibres, in ſome Perſons, may not grow Paralytick, ſo as not to be obedient to any, the moſt potent, Applications, 'tis equal: For either are of the laſt ill Conſequence; ſince now approaching Death makes a cautious Perſon unwilling to act, when the Actor muſt be blam'd for the Want of Succeſs, though the Recovery be an Impoſſibility. You are obliged here to give the ſtrongeſt *Alexipharmacks*, and to apply *Bliſters* and *Emplaſt. Solearia*, to promote the

the Circulation, till ſome lucky Chance happens that the Particles, now ſettling upon the Organs, and creating the diſmal Symptoms, may be thrown into the Maſs, and kept moving; and then, by adding Spirits too, the morbid Ferment may be precipitated, or be expell'd, and a Victory be gain'd. It can hardly be imagin'd what wonderful Effects have been wrought by theſe extreme Remedies, when the Phyſician had even little Reaſon to promiſe himſelf any Succeſs from them. Which I mention, in order to embolden the Application to them, as long as the Patient's Friends will encourage us to proceed: For I muſt own, that if *Involuntary Effuſions of* Fæces *and Urine, and if the Coldneſs of the Extremities, with a Failure of Pulſe, and the Loſs of Motion in the Extreme Parts*, can be cured by theſe Methods, as I have experienc'd they can; why ſhould we deſpair or ceaſe to act?

Here we give *Pulv. Rad. Serpent. Virg. Camphor. Sal. vol. C C. Sal. Armon. vol. Sp. C C. Theriac. Adrom. Elect. de Ovo.* and ſuch-like, frequently in a Day, in a watry Vehicle, to add Motion to the Blood, to recruit the drooping Spirits, to ſtimulate the Fibres, and evacuate by Sweats.

'Tis cuſtomary with Authors to blend *Stypticks* along with *Alexipharmacks*, and they look on them as proper Antidotes in theſe Caſes: Such are *Bolus vera*, *Terra Sigillata*, &c. I have all along ſhew'd that there are two States of Blood in Fevers, and as Authors have only in general told us that they are proper in *malignant Fevers*, to preſerve the *Craſis* of the Blood, let us ſee in what Manner they do act.

Their Effects then are to clog and arreſt any rapid Motion, (by having Particles of leſs Agitation than thoſe of the Blood, *&c.*) and to unite and agglutinate the Particles, too much diſſolv'd, by their ramoſe Parts: And theſe are the Effects they have

have on the Blood. The Power, they have on the Fibres, is to ſhrink and contract them into a narrower Compaſs; from whence their Diameters are leſſen'd. From the firſt Effects they may properly enough be given in the *Ardent Kind* of *Malignants*. But if we conſider their Power of contracting the Veſſels, we may conclude them alſo good in the *Hectical Malignants*: For 'tis a Maxim known in *Hydroſtaticks*, that *Fluids*, *Cæteris paribus*, *run ſwiftlier through a ſmall Tube of the ſame Altitude, than through a larger*. In Malignant Fevers, with a burning Heat, as I have ſeen ſometimes, along with *Hæmorrhages* and *Bloody Urine*, or *Diarrhœa's*, they are the proper Specificks. What we may ſay then, is, that in the *Ardent Fevers* they may be given in proper Doſes, as well as *Acids*, to impede the violent Motion: But in the *Hectical*, they cannot be ſafely given; unleſs they be blended with thoſe of the *volatile Kind*; by which Contrivance the Blood may receive little Harm, but the Veſſels much good; the one may be attenuated to a proper Degree, and the Contraction of the Veſſels may contribute to an equal Protruſion of the Fluids: So that we ſee, though they cannot have any Effects by throwing off noxious Matter, yet they may have other Vertues equally advantageous, by accidentally furthering a critical Evacuation.

To determine the Number of *Bliſters*, you have no other *Criterion* to rely on, ſave the Pulſe and Heat; and not only *theſe*, but alſo all Internal Medicines are to be admitted or rejected by theſe Marks; for 'tis equally dangerous to raiſe too violent a Commotion, as not to exalt its Motion to the juſt Standard.

Before I proceed to the Subdiviſions of *Continuals*, I ſhall here remind you why the *Cortex* is not uſed in the *Continual Fevers*, which is eaſily anſwered by the Management in *Intermittents* and

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Remittents. For I have before taken Notice, that all Fevers have their *Horrors*, *Heats*, and *Declinations*: And as the Fits of an *Intermittent*, are ſo many diſtinct *Fevers*; ſo do *Continuals* reſemble one Fit of an Ague: And as the *Cortex* cannot be given either in the *Fit* of the *Intermittent* or *Remittent*, at leaſt, with any Succeſs; ſo the *Continual* being but one long *Fit*, it cannot be given in the *Paroxyſm*: But as it ſerves to prevent the Return of the others; ſo may it prevent our falling into *Malignants*, if given timely, before our Seizure, and by the way of a Preſervative.

To the CONTINUAL belong the *Malignant*, *Peſtilential*, and *Peſtis*, as ſo many different Degrees of this CONTINUAL; which are thus diſtinguiſh'd.

1. The *Malignant* is, when a *Continual* Fever ſeizes us with an equable Pulſe and Heat, with Symptomatical Sweats, Dejection of Spirits, *Deliria*, *Vigiliæ*, *Coma's*, *Tendinum ſubſultus*, *Urinæ ſtramineæ*, Dry and Black Tongues; and theſe are the Firſt Degree of CONTINUALS.

2. The *Peſtilential* is, when theſe ſame Symptoms ſupervene with *Spots*, *Petechiæ*, or *Morbillar Efflorescenſces*, and they become Epidemical, and deſtroy many by their more incorrigible Qualities. *Vid. Vidius* tells us, λοιμώδεις --- *communiter vagantur & plures eodem tempore occupant, non tamen omnes vagantes communiter dicuntur Peſtilentes, ſed illæ duntaxat quæ pravæ ſunt, & pleroſque interimunt eorum quos attingunt.* And *Dolæus in Feb. Peſtil.* ſays, *Multi ſunt qui Peſtem à Febre Peſtilentiali diſtinguunt, ſed ſunt tantum diverſa Nomina circa diverſos Gradus.*

3. The *Peſtis* is, when this *Continual*, by the ſame Symptoms, is ſo violent, that hardly the One-fourth of Mortals eſcapes, which they frequently do, or die, in Four Days. Etmull. ait: *Omnium maximè eſt Peſtis ea vulgaris quam nunc Bubones,*

nunc

nunc Carbunculi, nunc Petechiæ, peſtilentiales inſequuntur. Et paulo infra, -- *Per Peſtem nihil aliud intelligitur quam Morbus maximè contagioſus & epidemicus, qui Ortum ducit ex Miaſmate venenato ab Aëre primum ſuſcepto, & hinc per Contagium propagato, quo occultè, & latentèr Homines aggreſſus in ſummum Vitæ Periculum conjicit.*

'Tis plain therefore that theſe Three Subdiviſions of *Continual* Fevers are different *Degrees* of the ſame *Species*, and are only diſtinguiſhable by the Degrees of Danger and Epidemicity. In ſhort, where-ever any Eruptions appear, and the Fever is very Mortal and Epidemical; and at the ſame Time, Trade with Infected Places, brings in Goods from them, without the due Quarentines, 'tis a very ſuſpicious Caſe; and nothing but a ſuperlative Ignorance, back'd with Avarice, can blame the Suſpicion. *Willis* ſays, *Interdum nimis ſecuri Peſtilentiam Ratione Symptomatum Febris communis æmulam contemnentes Pericula noſtra, non niſi ſerò deprehendimus.*

All Sorts then of *Continuals* may belong to the *Ardent* or *Hectical Species*, as may appear by Practice: and *Sydenham* proves and ſhews the *Peſtis* and *Febris Peſtilentialis* of 1665, 1666, to have been *Ardent*; for he ſays, *Primus inſultus Rigorem ac Horrorem quemadmodum & Febrium Intermittentium Acceſſiones, ferè perpetuum habet Comitem, mox Vomitus enormes, Dolor circa Cordis Regionem, ac ſi Torculari premerentur,* FEBRIS ARDENS, *uſitatâ Symptomatum* Συνδρομῇ *ſtipata, indeſinenter Ægros divexant, donec aut Mors ipſa, aut benigna Bubonis vel Parotidis Eruptio, quæ Materiam morbificam foras ablegat, eos ab luctuoſiſſimo Diſcrimine liberet.* And he mentions ſome Inſtances.

As to the *Hectical* Sort, read *Hodges de Peſt. Lond.* 1665. where he ſays, *Calor mitis in Puellâ & admodum blandus, interiora utique manifeſtò non conflagrarunt*

flagrarunt Incendio, — *E contra vero omnia tam pacata, tam ſerena, perinde ac ſi nulla Ægritudinis Procella factaret, nedum impenderet Vitæ jactura; revera mihi non conſtitit de Causâ Ægritudinis quam ſimulaſſe Morbum ſuſpicabar, donec Thorace nudato in dubia hic illic Stigmata pro More compuncta Partem Senſu vacuaſſe indicaverint, merito habita properantis Fati Arrhabone, eâdem nimirum Nocte Puella expiravit, vix dum vel ſuo, vel aſtantium Indicio valetudinaria.* And *Diemerbroeck in Peſt. Noviomagenſ. Hiſt.* 120, *& ultim.* ſays, 'tis ſometimes without a Fever; and ſo does *Barbette.*

Having ſhew'd then that theſe Fevers may be either *Hectical* or *Ardent*; let us ſee how Authors treated theſe Perſons under the ſeveral Sorts. They, who found them of the *Hectical* Kind, treated their Patients with warm *Alexipharmacks.* Thus *Hodges* commends *Sp. CC.* ℈ij. *vel* ʒj. *ex Aq. Epidemica. Barbette* praiſes his *Pulv. Alexiterius, viz.* ℞ *Rad. Contrayerv.* ʒß. *Petaſitid. Tormentil. Enul. Campan.* ā ʒj. *Raſ. CC. Ebor.* ā ʒj. *Corall. rub. ppt.* ℈iv. *Cinnam. acut.* ʒij. *Antim. Diaph.* ʒß. *m. Diemerbroeck* makes uſe of this: ℞ *Conf. de Hyacynth. Sal. Scord.* ā ℈j. *Sal. Card. b.* ℈ß. *Theriac. Androm. Diaſcord. Fracaſtor.* ā ℈ij. *Aq. Theriacal. & Card. Ben.* ā ʒj. *Ol. Vitriol. gt.* xij. *m. f. Hauſtus pro Sudore. Helmont de Peſte* commends theſe Seven, *Hypericon, Vincetoxicum, Enula, Dictamnus, Ariſtolochia, Laureola,* and *Rapbanus Sylveſtris*; as alſo Common *Rue, Zedoary, Scordium,* &c.

Sydenham having deſcrib'd his *Peſtis* as of the *Ardent* Kind, did accordingly Bleed his Patients plentifully; and he mentions one who us'd to Bleed *ad Deliquium Animi* (which is *Galen*'s Method hinted at above) ſucceſsfully: And he alſo kept 'em under a cool *Regimen:* 'Tis true, that he did afterwards alter his Method for a very different one, and yet ſucceeded; having after one Bleeding, gi-

ven Diaphoreticks for 24 Hours without Interruption, (in which he copies *Angelus Sala* very exactly and prudently:) However, I don't find that he did this, becauſe he did not believe the other a ſafe Method, (ſo far as appears at leaſt); but to avoid Reproach, and that he might not ſeem to ſtand alone in a Method: To which it may be added, That a *Peſtis* includes a *Complex Indication*, and may be therefore conſider'd as a *Fever*, and as a *violent Malignity*, from whence there is the utmoſt Danger of the *Spirits* being *immediately* either *evaporated* (by the violent Diſſolution of the Blood) or *fixt* (by the extreme Coagulation of it) beyond the Poſſibility of Recovery; and that therefore he thought himſelf obliged to neglect the *Fever*, and bend his Conſideration entirely to the *Malignity*. However, there is yet one thing to be conſider'd, in Relation to the Hiſtory of this *Peſtis*, which I look upon to be very material; nor do I find that any Perſon has yet obſerv'd it. *Hodges* and *Sydenham* ſpeak of the ſame *Peſtis*, and yet they diſagree in the moſt material Point: For Dr. *Hodges* obſerves, That Perſons, ſeiz'd, complain'd of no Heat, nor had they ſo much as any Suſpicion of a Fever on 'em: Whereas Dr. *Sydenham* expreſſes, That they had all the Signs of an *Ardent Fever*. Which of the two to give Credit to, is hard to determine; only Dr. *Sydenham* having taken up the Method of *Diaphoreticks*, as well as Dr. *Hodges*; to me, it is an Argument who gave the moſt faithful Relation.

Thus we ſee, that the different States, are by all differently treated; but that, as in Peſtilential Caſes, *Criſes* are not eaſily obtain'd; (for that the Humours are not Concoctible,) we are obliged to invert our Methods, to avoid a worſe Chance.

'Tis obſervable that Perſons, *Quorum Res eſt anguſta Domi*, are eaſier cur'd of theſe Sorts of Fevers, than ſuch who have fed plentifully, (and it may

may be that the *Plenitude*, in ſuch oppulent Perſons, overſtocks the Blood with a great *Heterogeneity*, not to be met with in the Conſtitutions of the Meaner Fry); and ſuch conſequently require fewer Evacuations: Whereas I have known Numbers of the richer Sort who underwent a harder Fate, for want of Room for ſuch Evacuations; or becauſe the Evacuations made, have neither been proportion'd to the Indication nor to the Strengths of the Laborants: But let ſuch thank their own Credulity, in leaving this principal Concern to the leaſt Knowing. 'Tis thus that I have often ſeen Poor Perſons, labouring under *Petechial Fevers*, recover without any great *Apparatus*, ſave ſome gentle *Evacuation* proper for the preſent Circumſtances, the *Pearl-Julep*, and ſome nouriſhing *Chicken-Broth*; which do more certainly produce their Effects on them, (as being ſeldom us'd to 'em,) than on the Rich. I would have it, however, remark'd here, That Young Practitioners will often be terrify'd, in Viſiting the Poor, by miſtaking Common Fevers for Petechial ones; becauſe of the Flea-bites: Which need be no farther mention'd, ſince this is eaſily diſcoverable by a Black Speck in the middle, which the *Petechiæ* have not; and that they diſappear; but that the *Petechiæ* continue conſtant, or at leaſt, upon retreating, produce dangerous Symptoms.

CHAP. IV.

Of Eruptive Fevers.

I Have already call'd theſe Fevers by the Name of *Neutral*, becauſe they are not always of the ſame *Species*, but are ſometimes accompany'd with an *Intermitting*, ſometimes with a *Remitting*, and

often with a *Continual Fever*, ſo far as to be ſometimes *Peſtilential*, as they have been through moſt Parts of *Europe* for theſe ſix Years paſt.

They are Fevers in which we expect a Criſis, *by Eruptions on the Skin*; (ſuch are the *Small-Pox*, *Meaſles*, *Scarlet-Fever*, *Rubeolæ*, *Cryſtalli*, *Raſh* or *Febris Miliaris*, &c.) Beſides the ordinary Symptoms that attend other Fevers, as *Head-achs*, *Vertigo's*, Inclinations to *Vomit*, *Sweatings*, *Thirſt*, *Inquietudes*, *Vigiliæ*, and ſuch-like: In theſe there is alſo ſuperadded *a certain Oppreſſion on the Breaſt, which is a diſtinctive Sign that uſhers in theſe Fevers.* And 'tis obſerv'd by Phyſicians, that whenever there is any Tendency from the Center to the Circumference, that then the Patients complain of *Oppreſſions*, Loads, and inexpreſſible Ueaſineſs that chiefly affect the Breaſt: And whenever the Efforts made to throw this offending Matter off to the *Cutis*, ſucceed; then, and not till then, that Uneaſineſs vaniſhes. This *Oppreſſion* is the uſual *Præcurſor* of all *Criſes*, even in *Common Fevers*: And as in theſe *Eruptive* ones, the *Criſis* is not very diſtant from the Beginning, ſo the *Oppreſſion* is at the firſt Seizure; whereas, in the *Putrid Fevers*, the *Criſis* ſucceeding the State, 'tis later obſerv'd in 'em. But if this peccant Matter is not ſufficiently thrown off; then, inſtead of Eaſe, by the partial Eruption, ſome dangerous Symptom ſupervenes: For where the Regular Eruptions are by any buſy Method retarded, Symptoms are uſher'd in upon the Parts; ſo that then they are afflicted with *Colicks*, *Deliriums*, *Coma's*, *Peripneumony's*, and many more ſuch; and the Fever is term'd *Anomalous*: Now this may happen in any *Stadium*; and therefore I wou'd have it remark'd as an *Index* of an *Irregular Eruption*, *Maturation*, or *Declenſion*.

I ſhall add no Reaſoning concerning the Nature of theſe Eruptions; ſince the Patient's being afflict-

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ed with all the Kinds of Fevers, argues that the ſame Cauſes which produce other Fevers, do alſo produce theſe, only that the Qualities of the Blood are of a particular Stamp for creating Eruptions; therefore I ſhall proceed.

Theſe Fevers, then, have ſeveral *Stadia*, as well as the others; but in *Theſe* they acquire not the ordinary Appellations of *Initium*, *Augmentum*, *Status*, (which is follow'd by the *Criſis*,) and *Declination*; nor do they follow their Order. The Firſt *Stadium* is call'd the *Apparatus*, which is the Space before the Eruption: The Second is call'd the *Criſis*, and is all the Space from the firſt Appearance of any Spots or Puſtules, to the complete Eruption of *All* that are to appear: The Third is in ſeveral, *Inflammation* and *Suppuration:* The Laſt is, in all, call'd the *Declenſion*, and is that Space when the Puſtules ſcab, or the Spots ſcale off, and when all Symptoms (if Regular) diſappear. The *Peſtis* might be, in regard of its Eruptions, referr'd to theſe Fevers; but becauſe the *Peſtis* is always a *Continual Fever*, and theſe are often far from it, I thought it beſt to place *it* amongſt the *Continual Fevers*.

If then the Symptoms of a Fever begin; if that Seaſon produces certain Fevers that are of this Stamp, we may gueſs them to be of this *Eruptive* Kind. But in a more particular Manner, if *Loads on the Breaſt, Coughs, or Aſthmatick Breathings afflict the Patient; and if the Urine ſettles with a concocted and laudable Sediment; we may almoſt pronounce, that ſome Eruptions will follow*: For 'tis obſerv'd, that Urine ſettling the Firſt Day, the *Criſis* will be on the Fourth. *Galen de Criſibus*, Lib. 1. p. 628. l. 32, *&c.*

Our Buſineſs is, next to find out the *Species* of the *Fever*, and the Manner of Seizure: As, whether it be of the *Intermittent*, the *Remittent*, or the *Continual* Kind; whether it be of the *Ardent* or

Hectical Stamp; what *Habit of Body* they are under. If the Fever is of the *Intermitting* and *Ardent* Kind, and the Patient of an *Athletick* Habit, whatever Species it retains to, you muſt firſt Bleed in Proportion to this Ardency and Strength, and muſt repeat it, if any Occaſion urges, and give all the diluting and cooling Drugs, as has been hinted above. If the Fever be of the *Hectical Sort*, give, in the Fit, the *Teſtaceous* Medicines in *Bolus's* and *Juleps*. But in the Intervals of the Fit, the *Cachexy* muſt be evacuated by *gentle Lenients* or *Vomits*, if indicated, to cleanſe the *Primæ Viæ*, no Others being proper at this Seaſon; (the *Criſis* being ſo near at Hand); and the *Regimen* muſt be ſuch as before-nam'd; and then the Patient is to be left to the Chance of what follows, which generally is a good one; ſuch Fevers moſtly producing diſtinct Eruptions. In this *Stadium* the *Cortex* is prejudicial, as I have experienc'd in a Gentlewoman, who labour'd under the *Febris Papillaris*, and had the *Cortex* given at the very Beginning: It occaſion'd a very irregular and odd *Fever*; for ſome *Papillæ* which appear'd lively one Day, diſappear'd in the Night, with an unconcocted Urine, and a dry Tongue; and others repullulated, and diſappear'd, ſhortly after, with *Delirium's*. And thus the Struggle was continued ſometimes with promiſing, at other times with deſperate Symptoms, for 20 Days; and and was abated gradually by Sweats, but at laſt, moſt apparently, by ſome Stools, with a concocted Urine. So that we ſee, though it has the Power to hinder a *regular Eruption*, yet it does not prevent the ill Effects from the *Retention* of the putrid Matter lodg'd in the *Sinus* of the Blood. Whether this Sort of *Compoſitum* is of too ſtrong a Nature to be curb'd by it, and how, I ſhan't now diſpute; but we find that even the greateſt Patrons of the *Cortex* don't eſpouſe its Uſe in this *Stadium*.

Mort.

Mort. p. 134. *de variol. inquit. In* Συνεχεῖ *autèm varioloſâ, ---- Natura propriis Viribus inſtructa Victoriam Criſi perfectâ in Stadio proximo Sponte, ſine Ingrati hujus Remedii Ope reportatura eſt.* And *Sydenh. in Schedul. Monitor. de Novæ Febris Ingreſſu, Ann.* $168\frac{4}{5}$ *ait. Eodem Remedio (Cortice, viz.) hanc etiam Febrim (viz. petechialem, miliarem) adoriebantur. Quod quidèm licèt Judicio Rationis ſuffragante tentarent (quia Intermiſit vel Remiſit) non tamen æquè feliciter illis ceſſit atq; prioribus illis Annis (à* 1677 *ad* 1685.) *plerúmq; ceſſerat. Mihi enim, quantum potui, deligentèr perquirenti, Compertum fuit, etiàm magnam Corticis Quantitatem exhibitam rariſſimè Ægrum à Morbo liberaſſe.*

What is here advanced about the *Intermittent*, will alſo hold good, if your Patient be ſeiz'd with the *Remittent*, which indeed is more frequent than the former; and as the *Eruptions* which ſucceed either of theſe, are, of the *Diſtinct* or only of the *Coherent* Kind; ſo they are generally in the next *Stadium*, left free from Hazard, and ſeldom do require more than a due *Regimen*; for the *Fever* either ceaſes or leſſens, and the Urine either drops a Sediment, or has none at all in it: Which are Arguments of a *partial* or *total Traſlation* of the morbid Particles to the Skin.

Where indeed the Fever, from the Beginning, is *Continual*, then they are *Comatous*, they are afflicted with *Subſultus*, and various other Symptoms. And if it retains to the *Hectick* Kind, or the *Heat* be ſmall, and the *Pulſe* weak; we are then oblig'd to have recourſe to *Alexipharmacks* of different Degrees, in proportion to the Defect of Spirits which are requiſite for a *Criſis*; for in this *Caſe*, 'tis not to be expected without theſe Helps. Not many Years ago I had a Patient, of twelve Years of Age, who was ſeized with a *Delirium:* Her Pulſe was

obſcure, and her Heat ſcarce perceptible. On the 14th of *March* $17\frac{1}{11}$, the Small-Pox broke out; ſhe had *Petechiæ* on her Neck, Arms and Breaſt; her Pulſe was quick and ſmall, with little Heat; the Urine was *Citrin*, but without any Sediment. I ordered a Bliſter to her Neck; and gave her *Sp. C. C. Gtt.* vj. in Sage-Tea. Alſo I preſcrib'd a *Bolus* of *Teſtaceous* Powders, and *Julap perlat.* every fourth Hour. By the help of theſe, the Puſtules broke out regularly (of the Flux Kind.) As Symptoms abated, Orders were left to leſſen the Doſes. On the 21ſt her Urine ſettled: The Puſtules maturated without any Trouble to her, ſave that the *Saliva* was a little glutinous, and leſs copious, and her Urine not plentiful. However, her Face was yet ſwell'd: I order'd her *Aq. Petroſelin* ℥ iv. *Sal. Succin.* ʒß. *Syr.* e. 5. *Rad.* ℥iß. Of which ſhe was to take every ſecond Hour two Spoonfuls: I order'd her a little Canary once a Day; and at Bed-time *Syr. de Mecon.* ℥ ij. The 22d, ſhe was ſtill feveriſh; ſhe ſalivated more plentifully; her Face was yet tumid; the Puſtules, from crude and wateriſh, now turn white and fuller; her Urine ſettled, but ſhe ſlept ill: I order'd the ſame Medicines to be continued. The 23d, I preſcrib'd as the Day before. Her Lips begin to ſcab. The 24th, her Salivation continued: The Urine was more plentiful, but without a Sediment: the Fever leſſens: Her Face was yet ſwell'd, and her Eyes were inflam'd, and watry. The 25th, Her Urine ſettled, and was plentiful; her Eyes grew better; and the Fever leſs: She ſalivated; Her Appetite return'd; The Remedies were the ſame as before. The 26th, they ſcab on the upper Parts, and below alſo: The Salivation and Fever leſſen. The 27th and 28th, the Salivation and Fever abate; Her Appetite now return'd; Scabs come on every-where. The 31ſt, the Scabs fell off: No Salivation remain'd: Her Urine was *Citrin*, without a Sediment: Her Appetite was good: She had

had no Stools from the Eruption till now: The Pulſe was hardly frequent. The 10th of *April* we order'd ℥iv. of Blood to be drawn off, which was Rheumatick, and the next Day an Infuſion of *Senna* was given, by which ſhe recover'd. Thus the Fever, tho *malignant* and *remiſs*, was manag'd without any great Pomp, through the ſeveral *Stadia*, to the Advantage of the Patient.

I was call'd ſome Years ago to a Gentlewoman, ſeiz'd with the Small-Pox. She had taken ſome *Sal. Cathart. amar.* by which ſhe was much dejected, and her Spirits were very low. Spots begun to appear, and ſhe was very fainty; her Pulſe was low and quick and her Heat ſmall. By which 'twas eaſy to gueſs that her Spirits were much exhauſted. I order'd her a Bliſter, and generous *Alexipharmacks*. Upon which her Pulſe grew ſtronger, the Puſtules broke out plentifully, her Sickneſs abated, and after the Eruption, a plentiful Salivation enſued: And by the Continuance of the gentle *Alexipharmacks*, ſhe recovered, without much more ado. The Puſtules on the Breaſt were large and *veſicated*.

It often happens that the Fever is *Continual* and *Ardent*; and the Management above-nam'd would be ſo far from being advantageous, that you would endanger a Train of very ill Symptoms: As I knew it to happen in a Boy of ſix Years of Age, in 1698; who, upon being ſeized with the *Variolæ*, had *Deliria* and *Subſultus Tendinum* upon him. His Pulſe was very ſtrong and quick; and his Heat very great. Upon giving *Teſtaceous Medicines*, and the ſtronger *Cordials* he grew much worſe: But upon changing theſe for Bleeding, with cooling and diluting Remedies, he grew cooler; his Pulſe became leſs ſtrong and ſofter; his *Deliria* abated; the Puſtules appeared; and in ſhort, he was cured by the cool *Regimen*, without much Pomp. This is

not

not only a ſtanding Truth in the Small-pox, but alſo in all Eruptive Fevers; for 'tis certain, that if the Fever be too violent, the Eruption will be an Effect of this Violence; and we ſhall by this Imprudence, hurry on Inflammations of the Lungs, the Head, or ſome noble Part, and thus haſten their Exit.

'Tis remarkable, that all Eruptive and Inflammatory Fevers early require Bleedings, and other Evacuations, (if at all:) and the want of them is rarely (even in the Ἀκμῇ) recompens'd by any Sudorificks, though the Urine be concocted, and they ſeem to be indicated. But the Heat requiſite for a Sweat colliquates the putrid Matter, reblends it with the Blood, impacts it into the Lungs, or ſome conſiderable *Viſcus*, and kills the Patients, when we might reaſonably have expected a better Fate. Whether it is, that the more we endeavour to heat, the more we incraſſate; whether the fibrous Parts of the Blood eaſilier remix; whether they are more bulky than to paſs the Pores; whether when the ſerous Parts are evaporated, the fibrous are ſtill retained; whether in this State the Spirits are too ſcanty; whether one or more of theſe contribute; 'tis little to our Purpoſe, any farther than that, Evacuations are to be made very early.

I was called, in 1710, to a Gentleman of Eighteen Years of Age, who had the *Variolæ*: They broke out with a brisk Fever: They were of the Confluent Kind: He was reſtleſs, thirſty, and very hot; he continu'd very hot all along from the Eruption to the Maturation; when the Puſtules were very painful, the Fever very high and vigorous, and the Arteries beat wonderfully ſtrong; the *Inteſtines* were ſo dry'd with the Heat, that we were forced to extract the *Fæces* (when the painful Throws offer'd) with Inſtruments, (for a Glyſter had no Effect, the *Fæces* being too plentiful;) there were *Petechiæ* on the Legs;

Legs; the Face, Hands and Feet were ſwell'd; he did not Salivate, but Breath'd ſhort, and Cough'd; his Urine ſettled; he was taken with a *Diarrhœa*, from whence his Right-Hand ſettled; the *Diarrhœa* continu'd for four or five Times next Day, and he ſlept well; his Stomach pain'd him from over-feeding; his Pulſe was ſtill ſtrong, and the Fever continu'd; his Face ſcabb'd; his Hands fell, from the Breach of the *Veſicula*, which was a Continued one: Notwithſtanding the violent Cough, by which he Expectorated plentifully, with the Aſſiſtance of *Linctus's* and *Pectoral Decoctions*, his Face did not fall, but Scabs grew four times upon him: At laſt a *Hectick* ſeiz'd him; but by the *Cortex* and a Cooling Diet, all Symptoms, along with the Fever, vaniſh'd. I treated him with Cooling and Diluting Medicines, and *Opiates* at Night; *Pectorals ex Decoct. Pectoral. & Tinct. Croc. cum Syr. Balſam.* And if Sickneſs requir'd, (join'd with Faintings,) *Teſtaceous Bolus's* with *Alcherm. ſ.M. & Julap. perlat.* I was inclin'd to ha' Bled him; but a gentle *Diarrhœa* enſuing, effectually abated the *Fervor*, (which before was Violent;) after which, Affairs ſucceeded well. 'Twas obſervable, That the *Diarrhœa*, *Scabs* and *Cough* were a *Succedaneum* for the Defect of the *Salivation*. I muſt here take notice of another Obſervable: 'Tis the Common Opinion, That the Evacuations by Blood and Stools, either contribute to prevent theſe Diſorders, when Epidemical; or at leaſt, to render 'em more favourable, if ſeiz'd; neither of which hapned in this Youth; for he was both Blooded and Phyſick'd plentifully before, and yet I never ſaw any one worſe Pitted than this Perſon was: I ſay not this, to diſcourage Perſons from theſe Precautions, but in order to a farther Enquiry how far they may be of Uſe to what they are intended for.

I ſhall

I ſhall now mention one of a *mix'd Stamp*. The firſt Day his Head ach'd: His Pulſe was weak: He was thirſty and feveriſh. 2d, He had a *Lumbago*, a Fever; and Sand was in his Urine. 3d, his Urine was ſandy: His Fever ſtill continues: This Night ſome Pimples appear. 4th, His Urine was ſandy and bloody: He was watchful: *Petechiæ* were on his Breaſt and Knee: His Fever was Continual. 5th, His Fever was fierce: His Urine was not bloody: He ſlept little, and had a *Diarrhœa*. 6th, He ſlept little: He had a *Hæmorrhage*, which leſſen'd the Fever. 7th, The *Hæmorrhage* was large, and he was watchful, but the Fever was *Hectical*, and his Pulſe weak. 8th, He had a *Hæmorrhage:* The Fever was violent, with a ſtrong Pulſe and great Heat: The Puſtules were of the colour of the Skin and Seſſile; in the Legs they were *Petechical*, ſmall, and depreſs'd at top, of the *confluent Kind*: His Thirſt was great: He had a *Diarrhœa:* Now the *Petechiæ* vaniſh. 9th, The Fever continued the ſame as on the 8th; the Puſtules begin to riſe and inflame; his Lips and Hands ſwell; the Puſtules are painful: He had a *Diarrhœa* for 3 or 4 times: He was watchful: And although he eat Cheeſe and drank Ale; yet at Night he ſlept well. 10th, His Fever continued violent, and his Urine high-colour'd, with a Sediment. 11th, The Fever was yet violent, his Urine *Citrin*, without Sediment: His Face ſwelled more; he did not ſalivate, but expectorated: The Puſtules in his Hands maturate, and thoſe of the *Abdomen* inflame: He rav'd, by drinking Claret. 12th, His Face and Hands maturate: The Puſtules of the *Abdomen* and Legs grow red at Bottom: He had a high Fever, was Thirſty: His Urine was plentiful and high-colour'd; he had a *Diarrhœa* for 4 times: His Right Arm was much pain'd: He ſlept ill. 13th, The Puſtules of his Face and Hands maturated: Thoſe of his Body were yet crude: A

plen-

plentiful Flux of Urine made his Face fall: His Arm was painful: He had a High Fever: He ſlept ill. 14th, The Puſtules in the Face ſcab, and maturate in the Body, but not in the Legs: He encreas'd his Fever and *Aſthma*, and made his Urine bloody, by drinking ſtrong Liquors; beſides, he had 7 or 8 Stools. 15th, The Fever was high: The Scabs of the Face fall off: Thoſe of the Hands and Body are fully ripen'd; thoſe of the Legs were half ripe: His Urine was plentful, *Citrin*: He was Aſthmatick, tho' he ſlept pretty well. 16th, The Fever vaniſh'd: The Urine was ſomewhat bloody; but by the Liberty which was taken of Drinking, from this to the 24th, his *Aſthma*, *Delirium*, *Cough*, and *Weakneſs* encreas'd, and he died a Week after. It had been poſſible for this Gentleman to have eſcap'd Death from the Small-pox, if he had been regular; which yet wou'd ha' been ſurprizing, conſidering he was then under the Operation for an *Empyema:* And moreover, the Fever was ſomewhat remarkable; for firſt, 'twas a *cool Malignant*; then *Ardent*; and laſtly *Hectical:* which oblig'd us to ſhift, from the *Volatile* to *Teſtaceous*; and from thence, to the cooling and diluting Medicines, according to the different Degrees of the Fever.

There are a Couple of Gentlemen who have aſſerted, that Methods may be made uſe of to hinder Epuptions, whether in the *Peſtis* or in the *Variolæ:* Their Sentiments are new; and I wiſh we may be aſſur'd of the Truth of them, by repeated Trials; becauſe we need not then wait for the hazardous Events happening from the Retreats of theſe Eruptions. Our Countryman *Sydenham* mentions a Perſon who dy'd of a *Petechical Fever*, and whoſe Eruptions and Death he blamed for the Want of another Bleeding: And *Boerhaave de Variolis* ſays, *Quamvis enim in hoc Morbo rarò Cogitetur de hac Indicatione*, (viz. *ut Stimulo Inflammatorio ablato—*

ſanetur

ſanetur Status præſens & impediatur ulterior ejus Progreſſus & proindè Caveatur futura Suppuratio, Gangræna, &c.) *& de hâc Methodo imprimis* (—*quæ deprehenſa eſt in omni Inflammatorio valere ne Inflammatio in Pus Gangrænámve abeat : quum in aliis omnibus ſuccedat, hic nihil repugnet, Morbus varioloſus ſæpe ſine Variolis ſit— Conſiſtet illa—in his* 1. *Mittatur Cruor* (*ad Citam largam pro gradu Mali moderandam aut repetendam Miſſione ſanguinis ut Moles Craſſi minuatur & diluentibus Spatium Concedatur; iterumque; Cita, larga,—— Miſſio Sanguinis inſtituenda—— debet Continuari in Remiſſionem ſatis notabilem Doloris vel ad prima ſigna Deliquij Animi; debet repeti ex Conſideratione redeuntium Symptomatum ad quæ tollenda prima inſtituta fuit; Cruſta —— abſens Finem definit*) CASUS TAMEN, IGNARO MORBI MEDICO, SÆPE DEDIT SUCCESSUS PROBANTES TALEM ARTEM.

Theſe are his own Words, gathered out of his various References; and this Accident (of Miſapprehenſion I mean) I am told, has encourag'd him to follow this Practice ſince: How it ſucceeds, Time will make it out; but I believe there are certain Caſes where this is utterly impracticable; for where the Perſons are ſeiz'd with the *Variolæ* or *Peſtis* of the *Hectical* Sort, and under the Defect of Spirits; the more Blood they take away, the more Spirits they draw off, and there would be too few left to keep the Circulation on foot. Beſides, I have ſeen ſome ſuch Trials ſucceed ſo ill, that I doubt, *in this Kind*, the Project will not hold Water, whatever it may do in the *Ardent Sort*.

In the ſecond Stadium of Eruptive Fevers. There is the ſame Variety of States of the Fever: *Where the Eruption is complete* and there is an Ἀπυρεξία: 'Tis then Folly to pretend any farther Buſineſs, but we ought to leave the Affair in this Condition; for we may, by tampering, remand the peccant Matter

Matter into the Maſs, which may give room for it to play a more tragical Game than before. I need not point out to you, that the diſtant Interval of the Pulſe and calm Temper, will convince us of the Fever's having left the Patient.

It may, *Secondly*, happen, that an *Intermitting Fever* may be join'd, in this *Stadium*, to theſe Eruptions; and then great Care muſt be taken that theſe Intervals be not, by any buſy Method, advanc'd into a *Continent*, much leſs into a *Continual Fever*. We ought here to be Spectators, and muſt only order a due *Regimen* as the *Species* of the Fever requires: For, in this Caſe, Nature of herſelf will conquer all Difficulties. *We muſt here again* (as I have hinted above) *be careful not to give the Cortex, till the Eruption is complete*; and then, it is ſafe enough to extinguiſh the febrile Ferment, and to hinder it from creating freſh Symptoms; though 'tis more uſeful in other *Fevers*, than the *Small-Pox*: For tis, firſt, an ungrateful Remedy, and then, if an *Intermiſſion*, or even a *Remiſſion* of the Fever comes on, a due *Regimen* is only requir'd, and generally ſuffices.

Thirdly, We often obſerve, in this *Stadium*, a *Remitting Fever*: And here the *Cortex* is uſeful, as in the *Intermitting*, after the Complete Eruption; and by ſo much the more, becauſe this being only a halv'd Interval, there is more Occaſion to obviate the greater Danger that may happen from Miſmanagement, which may turn it too ſoon into a *Continual*. Beſides, 'tis neceſſary to remark, whether the Fits retain to the *Ardent* or *Hectical* Species, in order to the Knowledge of the Medicines or *Regimen*, which may be proper in theſe *Species*: And Notice, moreover, muſt be taken, that the nigher we draw to an 'Ακμὴ in all Fevers, we muſt make the leſs free with any Evacuation, (unleſs Indicated by plain and almoſt demonſtrable Signs.)

Fourthly,

Fourthly, When the Criſis *is extremely Imperfect, and that more Matter yet lodges in the Maſs, (beſides what is puſh'd to the Skin), ſo that the Fever proves Continual, as it always happens in* Flux-Eruptions: Then the Caſe is ſo much the more deplorable, as the Strengths of the Patients are diſproportionate to the Symptoms. Here, too, the the Fever may be either *Ardent* or *Hectical*; and you muſt, both in the Regimen and Med'cines, alter as they require: For otherwiſe, if you ſhould Bleed and Cool in the *Hectick*, or give warm *Alexipharmacks*, and *Bliſter* in the *Ardent*, the Conſequence would be the Augmentation of thoſe very Faults we would amend. And, by the latter unſeaſonably given, you would, by adding more Fuel to the Flame, bring on all the Symptoms that are Companions to an Over-rarefaction of the Maſs; ſuch are *Bloody Urine, Phrenzies, Coma's, Reſorption* of the *Pus*, an entire Suppreſſion of the *Salivation*, and various other fatal Symptoms; for theſe, and many more may proceed from an Encreaſe of this Moment of the Blood, which will produce all theſe, as if the abſolute Quantity were really Encreas'd; for the Veſſels will, in each Section, contain a larger *Moles*. And beſides, 'tis known by Experience, that *Regular Separations are not the Effects of Fluids Irregularly mov'd:* That Irregularity depends either on too Rapid or too Slow a Motion of our Blood. So that on either hand, we have it in our Power to Augment or Leſſen the Motion; by which we may expect a Regular Eruption, *&c.* if we proceed as prudent Men; but the Reverſe, if Ignorance governs us.

I ſhall take leave to digreſs a little about the Patrons of the Cool and Warm Regimen and Methods I ſhall only mention two of our own Nation, who have ſeem'd to favour the one or the other: And indeed, if we examine their Practice throughly,

throughly, we ſhall find that, in the main, the Difference was but a *ſeeming* one. 'Tis true, we find *Sydenham* uſes *Alexipharmacks* more warily; and *Morton* ſeldomer approves of *Bleeding*. *Sydenham* would not give *Alexipharmacks* without an apparent Neceſſity; nor would *Morton* Bleed and give Coolers without an evident Reaſon: And yet, when Occaſion requir'd, we find them to have changed their Methods, but with too much Regard to thair darling *Hypotheſes*. The one had fix'd an *Inflammation in the Blood* for the Cauſe, and the other a *Venenum*: And the one, upon all Occaſions, inculcates the *Effrænationem Ebullitionis immanis*, whilſt the other preſſes the Uſe of *Alexipharmacks*, for the Expulſion of the *Venenum*. I ſhall not here take upon me to determine how far theſe Authors Works may have influenc'd young Practitioners to follow their Steps; this is but too much known in our Iſle, where many have fallen Victims to both theſe *Hypotheſes*, as each *Tyro* of Phyſick's Fancy led him. But I ſhall now ſhew you, that they themſelves chang'd their own Methods, as their Reaſon guided them; which is enough for us alſo to make Uſe of our Senſes and Reaſon, as they did. We find Dr. *Sydenham* allow'd a little Sack, and in his later Experience, even of Bliſters; becauſe, ſays he, —— *Adeo ut in omnibus ferè quos tractavi Variolis laborantes, obſervaverim* PULSUM IN CARPO SALIENTEM ÆGRE PERCIPI POSSE HOC TEMPORE, (that is, at the Eleventh Day.) And *Morton*, in his *Hiſtor.* 55. would have Bled one in the Progreſs; for, ſays he, FEBRIS *autem cum Delirio conjuncta jam evidenter recrudeſcebat Cute univerſâ Humore & Rubore Eryſepelatode ſuffuſâ, atque miliari Eruptione ubique in Interſtitiis Exanthematum efflore ſcente, undè non obſtante forti* ARTERIARUM VIBRATIONE *per totum Morbi Curſum fatale Prognoſticon Protuli*, PRÆSERTIM

QUIA NON POTUI ARGUMENTIS A PULSU PRÆTER MOREM FORTI ET ROBUSTO V. SECTIONIS JAM (the 11th Day) CELEBRANDÆ VENIAM A PARENTE IMPETRARE. The One then Bled, becauſe of the Strength of the Pulſe, and over-bearing Vehemency of the *Fever*; and *Sydenham* gave *Alexipharmacks*, and Bliſter'd, for the Weakneſs of the Pulſe and the Lowneſs of *It*.

I come to the Third *Stadium*; where *Suppuration* is ſometimes the Buſineſs of the Phyſician. Here, too, the *Fever* is the Compaſs we muſt ſteer by; which now is either quite *Vaniſh'd*, *Intermits*, *Remits*, or is *Continual:* And the Kinds alſo differ here, as in the other *Stadia*. But, as enough is ſaid on theſe Caſes above, 'tis needleſs to annex the Management; only we muſt remember to begin from the weaker Medicines, and aſcend gradually to ſtronger; for in ſuch Caſes we muſt not dwell upon a Method which does not prove ſucceſsful: So where, in the *Small-Pox*, the *Putrid* and *Secundary Fever* is violent, with a ſtrong Pulſe, great Heat, *Anxieties*, or *Phrenzies*; the gentler Coolers and *Opiates* are too weak, without *Bleeding:* Nay, in ſuch a Caſe, I find that *Opiates*, unaccompany'd with the *Bleeding*, do *ſtupify* the Patients wonderfully, without any Advantage gain'd at all by them. Indeed, Evacuations are not now to be attempted without an extreme Caution and Conſideration; but, however are not to be neglected, when there is an Indication, and *quod Citò fit, bis fit*. Where Nature has ſo far conquer'd the noxious Matter, as throughly to have exterminated it from the Maſs, our Buſineſs is at an end, and a prevention of its Return by an ill Regimen (and all Symptoms thence ariſing, when reblended with it) is our Task. Thus, in the *Small-Pox*, by preventing Symtoms that diſturb this Order of Nature, by either quelling the exorbitant Commotion (by which the Puſtules are reſorb'd,) or by animating its Motion (for want of which

which, they turn ſeſſile and depreſs'd, and either impoſthumate not at all, or very little; hence *Delirium's*, *Subſultus*, and all ill Symptoms;) you may place your Patient in a ſafe Way, who before ſeem'd at the Jaws of Death. If the Fault be *local*, as it ſometimes happens, it is not amended without a local Application.

It may here deſerve a Queſtion, why *Topics* have never been made uſe of to the Face, in order to promote *Suppuration*; for if the Face continues to ſwell much, and if the *Salivation* keeps on foot, Affairs go well: And if the Reverſe happens, 'tis a dangerous Caſe. We find that the Face cannot keep up to this Pitch, if Evacuations drain the Matter through other Ports, or there be any Miſmanagement in Diet or Medicine, or any other Symptom revulſes the Humour. In ſhort, the Danger of its Retreat is never over 'till the numerous little Inflammations are fully ſuppurated; that is, 'till all the Blood, (pure and impure,) impacted into the little Cuticular Fibres, and engag'd in ſuch certain Rows of them, turns into Matter, and diſembogues into ſo many Common-ſhores; and thus leaves the Blood free to circulate calmly on, without any Impediment to Motion, or leaving any extraneous Matter in it to create any farther Fever. 'Till this, I ſay, happens, we are obliged to ſteer with great Caution: for Reſorption of any Parcel of this ſtagnating Matter too often produces Symptoms irremediable, though under the beſt Hands. Circumſtances being put in this Light, 'tis amazing to find that Phyſicians never have attempted *Topics* to haſten a Suppuration in the Face, from whence ſo many unforeſeen Accidents hurry us headlong into the Grave; for where the Deſign is Suppuration of many Phlegmons, and the Fever is a Symptom of the Pain attending the *Tubercula*, it is natural to believe, that what we would apply to one large

Phlegmon to eaſe and ſuppurate it, would hardly fail to have the ſame Effect upon many. And in Effect, it has been found, that *Diſcutients*, *&c.* applied in this Caſe, have not fail'd of their Effects, as is evident in *Diemerbroecke*, *Hiſt.* 13. *De Variolis & Morbill.* where he relates, *That one Mrs.* Cowper, *by the help of Cinnamon-Water rubb'd on the Face, prevented any Eruption there.* Hence are *Epithems* of Saffron, Roſe-water, Women's Milk, and ſuch-like, applied to the Eyes: Hence we uſe Aſtringent Gargles for waſhing the Mouth and Throat: Hence Saffron-Stays are dipp'd in Women's Milk, and applied outwardly to the Throat. We then are of Opinion, that the *Reſtringent* Faculty of the one, can hinder the Eruption of them in theſe Parts, and that the *Diſcuſſive* Force of the others can diſperſe the Matter of the Puſtules. In ſhort, it is reaſonable to believe, that as we ſuppurate a *Bubo* in the *Peſtis* with good Succeſs; nay, and we look upon it as good Practice, to haſten the Suppuration of it; So I cannot ſee but, by a Parity of Reaſon, we might alſo ſafely ſuppurate the Puſtules of the *Variolæ:* For whatever Symptoms happen from the Retroceſſion of a *Bubo*, may alſo happen in the *Small-Pox*, from the Puſtules returning, or turning Seſſile. Now, if theſe are poſſible; Why may not Suppuration be promoted there alſo? And there may be this Comfort in the Trial; that I ſee no Inconvenience can attend it, but much Good.

Another Quære *is, Whether it be good to cut the Bluſhes e're they ſcab?* I ſhall mention ſome Authorities, and give in my own Sentiments. *Riverius*, *Diemerbroecke*, and ſome others, ſay, That Experience has taught, that when they are cut, they are longer in curing, and make worſe *Eſcarr's*; and therefore they believe it better to leave it to Nature. *Mayerne* adviſes cutting them when they

are

are full, deterges them, and ſo lets them ſcab and dry. *Langius* ſays, *Where they are watry, undigeſted, livid, and from the Air, he would open them; for then the Matter is very corroſive and exulcerates the Part, and ſo makes a deep Pit; but where they are thick, white, digeſted, and concocted,* he ſays, *there is no occaſion.* The Practice at preſent is in Diſuſe. And ſo far I can ſay by Experience, That if the Cuticle be ſeparated, and a Scab comes upon it, the *Cicatrix* is very ugly; and the oftner they happen to ſcab, and fall off, the more they are mark'd; as was very evident to me in 1710, when the *Small-Pox* were epidemical, and very fatal, one of my Patients, as above-nam'd, had them repullulate four times, and the *Cicatrices* were the Ugliеſt I ever ſaw. And in the Main, I ſee little Advantage to be gain'd, unleſs we can hinder the ulcerated Parts beneath to ouze, which is dangerous; and therefore 'tis, at leaſt, not to be done, till a complete Maturation, and then the moſt of the Damage is over.

Having run through the various *Stadia* of theſe Fevers, I come now to the laſt, (*viz.* the *Declenſion* or *Deſquammation.*) In moſt other *Eruptives*, this is the third; but in the *Small-Pox* 'tis the fourth. If there are no Remains of a Fever, the Patients are in Safety; or if the Fever *intermits*, *remits*, or a *Hectick* comes on, cooling *Decoctions* and the *Cortex* will re-inſtate them; as I lately experienc'd in a Child of three Years of Age, whoſe Siſter died *comatous* and feveriſh. She, I perceive, was held, as the Child I am going to mention: But the Patient, by a prepoſterous Method of *Cathartick*s repeated, (and ſome other Miſtakes,) miſcarried. And from hence I was called to this Child. The Scabs were quite vaniſh'd: She had a Cough upon her, alſo an *Anorexy*, and a *Hectick* Fever. I order'd ℥iij, of Blood to be taken away: I gave ʒiij *Cort. peruv.*

peruv. opt. ſubt. pulv. to ten Grains at a time, and order'd her to drink after it a Mixture of *Aq. Lact. alex.* ℥viij. *Syr. Balſamic.* ℥i ß. From this time forward ſhe was relieved, and in five Days her Pulſe grew calm. She had no Heat: Her Spit was concocted: She regain'd her Appetite: Her Urine from intenſely Red, became *Citrin:* And in twelve Days ſhe was perfectly recover'd, and grew plump. If the Fever is ſtill Continual, they are in imminent Danger, and do generally go off *anhelous* and *delirious*.

They who labour under the *Morbilloſe* or *Scarlatine* Fever; undergo the *Stadia* I have now nam'd, (ſave Maturation,) and they are afflicted with all the Kinds of Fevers before the Eruption; at the Effloreſcence; and after it is over; as I have experienc'd. And therefore all the Methods above-named muſt be uſed, as Occaſion ſerves.

I was called to a Gentleman, who, after a ſharp Fever, was afflicted with a *Diarrhœa* and *Vomiting* [*Cholera.*] His Scarlet appear'd, but preſently retreated; and his Throat ſwell'd: He died in a High Fever in four Days. Doubtleſs, if he had been blooded, they would have broke out regularly, and his Life might have been ſaved. I was called, four Years ago, to a Girl, who, at the Time of the Eruption, had a violent Fever on her; ſhe was kept in a hot Room in Bed, and her *Regimen* was warm; whence ſhe was reſtleſs and watchful, and under the Danger of *Deliria*: But by a cool *Regimen* ſhe immediately grew better: The Scarlet appear'd regularly. She reſted, and ſoon recover'd. *Morton* very well obſerves the ſucceeding Symptoms to be either *Colliquative*, and to require *Opiates*; or *Inflammatory*, and to require Bleeding: Both which I have found true. And I lately found the Colick (in a Boy, after the Meaſles) to be taken off by Bleed-

Bleeding and Milk-water; becauſe of a fix'd Pain, and his being very feveriſh.

Here I ſhall crave Leave for a ſmall Digreſſion on the Puſtular Fever in 1710, which was epidemical and very fatal. They begun with *Algors*, but not remarkable; which are certain and faithful Fore-runners, and are the *Date* of any Fever. Next to this, ſome were ſeiz'd with Headachs, others with a *Lumbago*, and many with a *Vertigo* only. But the Temper in moſt was ſo mild, that unleſs the Pulſe was narrowly felt, you would have been deceiv'd into a Belief that they were only *Hypochondriacal:* The Pulſe was *myurus*, very frequent, and beyond a hundred Stroaks in a Minute, although the mild Temper and Sighings put on the Shape of *Hypochondriaciſm*; ſo ſeldom did they, at the Beginning, complain of any violent Symptoms: For their Spirits were ſtole off quietly; and 'twas obſerv'd that they died without any Struggle, and then no Puſtules appear'd. The ſtubborn Watchfulneſs brought on, the 4th or 5th Day, either a *Coma* or a *Phrenzy*, according to the Conſtitution of the Decumbent, which did not yield to Remedies. The Urine, at the Beginning, depoſited a Sediment pretty laudable, and the *Decumbents* fell into ſpontaneous Sweats, and Puſtules broke out; and thus, for a while, Affairs ſeem'd to proſper tolerably well. But if any Medicines were given, by ſuch as were call'd in, the Urine immediately became confus'd, and the Patients turn'd *Comatous* or *Phrenetick*. In other Conſtitutions, it was obſervable, that if Sweats came on, the Urine remain'd concocted, Puſtules broke out, Symptoms abated upon their Continuance, and they preſently recover'd; nay, at the firſt Appearance of it, this was farther remarkable, that ſuch Phyſicians as thought they had found a certain Method to relieve them, and that by *Sudorificks*, did at laſt find their Miſtakes

in moſt others, not without Confuſion: They either died or recover'd in eight Days. This was certain, that a Merchant did at this Time, contrary to an Order (then in Force, for Ships obſerving a Quarantain, if from the *Baltick*) unload a Veſſel from *Sweden* with Flax, *&c.* and that a certain Occaſion oblig'd moſt of the Inhabitants, out of Neceſſity or Curioſity, to be very near the Place of Unloading: Immediately upon which, this Fever became ſo common, that every Houſe had almoſt its ſhare; and this Merchant who committed this Miſdemeanour, ſuffer'd, and fell by it himſelf. But a Froſty Seaſon ſucceeding, it became leſs frequent; and, at laſt, by a ſtrong Froſt, it quite vaniſh'd. I ſhall ſubjoin ſome Remarks on it, and then ſhall proceed.

Firſt, If the Patients had a ſharp and Pungent Heat on them, along with a ſtrong Pulſe, and their Urine was turbid, confus'd and milky, although they had Sweats on 'em, theſe were ſymptomatical; and the Eruptions thruſt out under theſe Circumſtances, were not ſuch as diminiſhed, but added to the Symptoms. But where the Urine continued concocted, or Concoction had preceded, and it turn'd clear or *ſtramineous*, and where the Pulſe and Heat were not too ſtrong; theſe Sweats and Eruptions were critical, and the Fever vaniſhed, or turn'd Remittent, and ſo, in a ſmall time, was breathed off.

Secondly, Where the Pulſe was weak, and the Heat imperceptible, or near the Natural; then the Eruptions did not ſucceed, nor could the Blood be clear'd of them; and then the Caſe was deſperate.

Thirdly, That no Evacuations (not even a Gliſter) ſucceeded well atthe Time of the Eruption, if the Pulſe was weak and low; but that they either (in Proportion to the Evacuation, cauſed the *Papillæ* to diſap-

diſappear, or turn ſeſſile and diſcolour'd; and then begun a-freſh all the ill Symptoms, till the Blood was again (which was very hard to do) enabled to part with them.

Fourthly, That Trouble of Mind, or Concern, caus'd theſe Fevers to turn up to the Head, and either made them turn *Phrenetick* or *Comatous* in a ſhort time.

Fifthly, Where there was a large Quantity of Spirits (as was eaſily gueſs'd, by the Strength of the Patient, and a large Pulſe) ſmall Miſtakes did little Harm; but where there was a Penury, any Error deſtroy'd them irrecoverably.

Sixthly, That after the Declenſion of the Spots, if the Urine was concocted; gentle *Diarrhœa's* did Service, and, by degrees, they recovered: Nay, if we were forc'd, by Lenients, and if it was upon a concocted Urine after the State, and the Fever was long in going off, they ſucceeded well.

Seventhly, Coughs were a good Sign, if the Eruption had vaniſh'd, and the Urine was concocted; then the Expectoration carry'd off the Fever, and prevented other Accidents.

Eighthly, If the Urine ſettled, and the Pulſe grew ſtrong after the Sweats, and more ſoft, it betoken'd well.

Ninthly, The *Cortex* avail'd little before the Eruption, as is uſual in other Eruptives, but kept them in a neutral State, and they ſuffered long for it; but after the Eruption, it ſucceeded well enough.

Tenthly, That though Sweats ſucceeded in ſome who did follow this Method, from Nature's Inſtigation, I mean, when there was a previous Coction, or a Serous Blood; yet it was found not to ſucceed, unleſs they continu'd them uninterruptedly, and gave them the gentler *Alexipharmacks*, ſuch as *Teſtaceous* Powders, *Julap Perlatum*, and ſuch mild Medicines,

Medicines, as only ſupported the Spirits, without heating the Sick; for if you gave them to ſuch a Degree as any-ways heated, the Sweats ſtopt, and they dy'd.

Eleventhly, All Evacuations were to be made uſe of from the very Beginning; or they ſeldom, if at all, ſucceeded: But if you made uſe of *Bleeding*, *Sweats*, *Emeticks*, or *Lenients* from the Beginning, Affairs ſucceeded well enough; only if *Lenients* were given after Bleeding, the Sediment in the Urine was plentifully thrown off, and the Fever, in ſome, was check'd in the Bud. As to *Diaphoreticks*, it is to be own'd, they ſucceeded, in ſome, at the firſt, who were inclinable to Sweats, without the Danger of over-heating; and in the older People, and in ſuch whoſe Blood was not too Viſcid, but rather Serous and Phlegmatick: However, the Method of *Bleeding*, and *Lenients*, with gentle *Pearl Juleps*, afterwards completed the Cure moſt ſafely.

Having ſaid enough of this Matter, I ſhall, under the next Chapter, recite an Obſervation or two, to illuſtrate this Affair.

CHAP. III.

Of Criſes.

A *Criſis* is a ſudden Change, to better or worſe, in Fevers, from Κρίνω to *judge*; becauſe by this Change we paſs Judgment. When the Blood contains any Heterogeneous Matter, and a Struggle is rais'd in it to throw off this Load, it is judg'd to be ready to part with theſe Particles, when the Urine drops a Sediment, and the State is at hand; and thus the *Criſis* commences when the Blood

Blood calmly ſecerns its noxious Particles: But whether Nature will do it by its *Pores*, *Inteſtines*, *Liver*, *Lungs*, *Uterus*, *Stomach*, *Noſe*, or *Anus*, &c. is not always eaſily determinable; for *Sweats*, *Diarrhœa's*, *Coughs*, *Jaundices*, &c. and even *Abſceſſes*, equally terminate Fevers; for it is not the Figure, but the Patency of the Emiſſaries, that determines the Paths of the Secretions in different Perſons; ſo that whoever has by Nature the Pores of the Inteſtines more patent and more yielding than thoſe elſewhere, will throw out theſe Morbid Particles by them. That it is not the Figure that paſſes theſe Particles, has been made evident, by ſhewing, that all the Arteries in every Section of them, are circular; and by demonſtrating that Glands are but Complications of theſe Arteries.

In *Criſes* there are Three Caſes.

Firſt, *Where the Urine is groſs, thick, turbid, milky and confus'd, or where Suſpenſions follow a laudable Sediment, 'tis call'd the* κρῖσιν ἀναλελαμμένον. This is an Argument that the Morbid Particles lie buried in the *Sinus* of the Blood, and are ſo intimately blended with it, that Nature is in danger of being ſurmounted, and that the *Criſis* is not yet begun; or if begun, has gone backward: And therefore, that all *Evacuations*, *Eruptions*, or whatever Attempts Nature makes under theſe Circumſtances, are *Symptomatical*; and by furthering any of theſe, 'tis odds, but that you deſtroy your Patient: Which is confirm'd by *Sennertus*, ſaying, *De Febre Petechiali, ubi Coctio in Urinâ Petechiæ expellendæ, alias non.* I am not ignorant, however, of what *Foreſtus* ſays, that *Criſis agnoſtica plerumq; ſanat. L. 2. Obſ. 26.* By which, he means nothing farther, than that if *any gentle, moderate Evacuation*, which does not weaken the Sick, happens, ſuch as a gentle *Diarrhœa* in the *Small-Pox*, which does not hinder the Puſtules to break forth, nor produce

produce any dangerous Symptom; ſuch are *Sweats* before a *Criſis* in a Fever, which neither diſturb the Head, nor introduce any other Accident, becauſe they are gentle; then theſe may be overlook'd: But if ſuch continues, and becomes conſiderable, inaſmuch as the Strengths of the Patient decay under it; then it is neceſſary, according to the urgent Symptoms, *either to quell the Commotion*, by *Bleeding*, *Dilution*, and ſuch-like, (only having Regard to the Fever's being near the ἀκμή;) or, *if the Motion be too languid*, to ſupport the Spirits with *Alexipharmacks*; or *Bliſters* muſt be apply'd, 'till a better Chance happens. *Sometimes, here, the Cortex is of Uſe*, if there be Remiſſions, and you ſuſpect the Nature of the Fever, (but *not in Eruptive ones.)* This is call'd, *The State of Confuſion.*

I ſhall ſubjoin an Obſervation or two, to confirm theſe Sentiments, and ſhall proceed to the other two Caſes.

Anno 1710, I was call'd to a Gentleman, who finding himſelf diſorder'd, was twice Blooded: Some time after, he took his Bed; and when I came, I found him treated with *Teſtaceous Powders*, *Cinnabar*, and *Cordial Juleps*, ſtock'd with Malt Spirits, which are ſtrongly *Empyreumatical*; he ſweat plentifully, and Red *Puſtules* appear'd copious on his Breaſt; his Heat was ſharp, his Pulſe weak, and his Urine was milky and turbid; hence I boldly pronounc'd, that theſe were not *Critical:* Next Day his Urine was Crude, as before; and notwithſtanding that we withdrew all ſtrong Cordials, he yet ſweated abundantly; and after this, came on a Fetid *Diarrhœa* very plentifully; his Pulſe was larger; he unexpectedly went off *Lethargick*; after his Death, Bloody Stools were thruſt out, which doubtleſs had been occaſion'd by the neglect

neglect of Bleedings, and by the Adminiſtration of the hot *Cardiac's*.

The ſame Year alſo a Gentlewoman conſulted me; ſhe was afflicted with a great Head-ach, and was Plethorick; her Heat was moderate, and Pulſe not ſtrong; hence I only took off ℥v of Blood, which reliev'd her Pain; I adviſ'd her to go to Bed; ſhe fell into univerſal Sweats, and her Urine was concocted; while ſhe Sweat, her Tongue continu'd moiſt, and ſhe grew better, and her Pulſe ſtronger, and more undoſe; but whenever ſhe ſuppreſs'd the Sweats, as ſhe often did, her Urine turn'd muddy, and ſhe was troubled with Vomitings; hence, upon taking a little *Aq. Pulli*, ſhe vomited freely three or four times, by which however her Spirits were exhauſted; but, by ſome Bolus's *of Pulv. e Chel. c. Bezoar. Lap. de Goà & Alcherm.* every fourth Hour, with a little of her *Julap. perlat.* her Sickneſs abated; her Urine from lacteal and confus'd, ſettled with a laudable Sediment, and her critical Sweats return'd; but being again weary'd with theſe conſtant Sweats, by riſing out of Bed and cooling herſelf, her Urine a ſecond time became muddy, and now had only Suſpenſions in it; her Tongue grew dry and black; ſhe became ſick and fainty, and her Pulſe intermitted. Upon renewing the *Bolus*'s with *Serp. Virg.* to ſome few Grains, and applying a *Bliſter* to her Neck, the *Papillæ* appear'd next Morning. I would (from the Weakneſs of the Pulſe, the moderate Temper, and comatous Diſpoſition) have apply'd more Bliſters, which were only conſented to, twelve Hours after, by the Aſſiſtant, who then ſaw the Preſſing Danger of omitting them longer; but neither *Theſe*, nor *Volatile Salts*, added to the *Bolus's* could awake her, for ſhe dy'd *Comatous* next Morning.

2*dly*,

2*dly*, *Where the Urine is concocted and drops a laudable Sediment, or has a* Nubes *in it that lasts for many Days, which unites more and more, and at last settles to the Bottom.* This fairly denotes a *Separation*; and such as *Riverius* adventures to pronounce well of, even in Pestilential Cases. The Sediment in the Urine to be laudable, *Bellini p.* 14. *de Urin.* says, *Sedimentum debet esse figuræ retusæ Pyramidis vel portionis Sphærqidis cum Basi in Fundo Vasis.* I shall add, that it ought to be equal, not farinaceous, κριμνώδης, nor like *Sperma Ranarum*; for these are either Tokens of Crudity or Overcoction: But it ought to be chylous, *instar Genituræ vesicalis*, and lie and look like White Clouds. When the Urine has been thus *a Statu*, and *Sweats* or *any other Evacuations* supervene, they are *critical*, and are to be *encouraged*, whether the Sediment continues or not: Nay 'tis better that it should vanish, because 'tis a Sign of an entire Victory; and, I doubt not, but our *Febris Anglica Sudatoria* had a Concoction previous to its Sweats.

However, I have too often found the Urine to settle well and laudably, and yet the Patients have labour'd under some troublesome Symptoms; which seems to be a sufficient Reason to conclude, that tho' the morbid *Miasma* do part from the Blood; yet, that there is no great plenty of this Matter still resting within, and that the *Separation* is only partial, and not easy to be expell'd, but by a nice Management, and that the *Crisis* which follows is *imperfect*. This is the Case in the *Flux-Pox*, where during all the *Stadia* (even of the *Maturation* and *Salivation*) the Urine often settles. If indeed Affairs succeed without this Concomitant Sediment (supposing it to have preceded,) 'tis a better Sign than if it yet deposites one; because it argues the Matter less copious in the one, than the other. But if, notwithstanding the *Salivation*, (which in all Fevers

Fevers is a *Critical Evacuation*,) the Urine ſettles; there muſt be a great Plenty of Matter in the Blood; and if the Strengths of the Patient fail not, it argues there is Matter enough for ſupplying the Eruptions, as alſo for any gentle Evacuations attempted by Nature over-and-above: So that in a *Miliary Fever*, the gentle *Diarrhœa* is uſeful. Hence, in the *Small-Pox*, the *Salivation*, *Flux of Urine*, and ſometimes the *Diarrhœa*, when gentle, are of uſe, as is the *Spitting Cough*, or even the *Scabs* falling off, and repullulating in the ſame Diſeaſe. Hence it appears why *Riverius*, in his *Febre Peſtilent. Monſpelienſ.* blooded his Patients, tho' they had the *Parotides Criticæ*; for altho' the *Evacuation* was *critical*, yet it was *not ſufficient* to evacuate the whole Matter of the Fever; ſince notwithſtanding this Eruption, all who did not Bleed, loſt their Lives. I then aſſent to him, when he ſays, *Non erat capax totam Materiam morbificam excipiendi.* Hence it appears why *Sydenham*, in *Febris Varioloſa*, tho' the *Urine was concocted*, and *Sweats came on*, *took Blood* from his Patients; *They* being only a *Partial Criſis*, (if any at all, which is another Queſtion:) Hence *Bleeding* in his *Putrid Fever in the Small-Pox*, was uſeful, the Matter being only *imperfectly* exterminated. *'Tis therefore neceſſary*, *where the Urine is concocted*, *and yet Symptoms abate not*, *upon ſome Evacuation that is critical*, *becauſe inſufficient*; *to proceed to ſome farther Evacuations*, which may probably have the deſir'd Effect, of either diſpoſing the Blood to ſeparate more effectually, or make it to do ſo, if the Strengths of the Patient will allow: For otherwiſe 'tis a diſmal Caſe, and hard to manage the Balance level; ſince over-doing either in the warm or cool *Regimen*, is equally fatal. Indeed, in eruptive Fevers where the *Criſis* is not very diſtant from the Beginning, we may make free with proper Evacuations,

ations, if Indicated; but in other Caſes, where the Ἀκμὴ is at a greater diſtance from the *Apparatus*, we muſt, at that Seaſon uſe Evacuations very warily: However, if Nature be ſlow in ejecting her Enemy, or the Burden be great, or ſhe do's it but *partially*; we muſt then try the moſt gentle and probable Evacuations, to ſupply this Defect; and they are ſafelieſt attended with *gentle Cathartick*s, or *rather Lenients*, as I have experienc'd in ſeveral, even in a *critical Parotis*, but *partial*; for ſuch carry off the Load *per Epicraſin*, and gradually, even in Peſtilential Caſes. If what *Sanctorius* advances, held in our Clime, it would be more probable, by a Four-fold Proportion, according to Dr. *Pitcairne*, that *Diaphoreticks*, given upon a digeſted Urine, would carry off the offending Matter, than *Lenients*: But this being found by Counter-Experience to be falſe, as Dr. *Floyer* has aſſur'd us; for that we loſe only, in the Space of one Day, 6 or 8 Ounces of *Perſpirabile*, in the room of 30 or 40, or 50 Ounces loſt in *Italy*: And it is probable that, in our Climate, we perſpire as much as the ſame Surface (equal to that of our Bodies) loſes in Exhalations on the Sea; for then 17 or 18 Feet Sq. evaporating 7 or 8 Ounces of Vapours, our Body of equal Surface loſes no more. And if we add half an Ounce (*quam proxime*) loſt from the Surface of our *Bronchiæ* (which, to compute, I found out a peculiar Method,) the Exhalation of Vapours from the Sea, and the *Perſpirabile* from our Pores, will, in all Climates, bear a near Proportion: So that in *England* we ſhall loſe 8 Ounces, whereas in *Italy* they loſe 50. Now as the above-mention'd Gentleman concluded it better to give *Diaphoreticks* than *Lenients* in a Fourfold Proportion; I may, *vice verſâ*, conclude from Reaſon, back'd with Experience, that *Lenients* are, upon all Accounts, ſafer in our Iſle, than *Diaphoreticks*; becauſe there is a greater

greater Patency of the Mouths of the *Inteſtinal Glands*, than of thoſe of the *Cutis*, (whether the *Mucus* in the Inteſtines relaxes the Mouths of the Glands; or whether alſo the Surface of *Them* be nearly Equal to that of the *Cutis*; or, whether the Motion of our Blood, in theſe Climes is more Slow, and conſequently is determin'd more towards the Inteſtines than the *Cutis*; or, laſtly, whether any one or more of theſe Reaſons concur, I ſhall not determine:) And hence more can (tho' only upon Concoction juſt begun) be evacuated; and leſs Diſturbance and Commotion is rais'd than by *Diaphoreticks*; which can only be ſafely given after the *State*: And they are moreover ſo often contra-indicated, that they are dangerous, becauſe they often raiſe Phrenzies, by forcing the Blood too impetuouſly into the *cortical* and *callous* Subſtance of the Brain, from whence there is frequently no poſſibility of remanding it. I ſhall add, that Sir *John Floyer* has elſewhere obſerv'd, that the Perſpiration, in *Italy*, is found to be to ours as 6 to 3; and even in this Caſe, the Diſproportion is in a double *Ratio*, and it would be doubly more probable, that Fevers would be carried off by the Pores *There* than *Here*; the contrary of which is true by the whole Proportion inverted in our Clime: And even thus it becomes at leaſt doubly more probable, that Fevers may rather be carried off by Stools with us, than by the Pores.

3*dly*, *If the Patient be ſeiz'd with a Fever, and his Urine comes to a Concoction, and immediately from a true and concocted Sediment, it either turns pale or citrin, without any Hypoſtaſis*, we muſt wait a while; *for if Symptoms abate, and the Fever ceaſes and diminiſhes upon it*, 'tis an Argument of a *ſalubrious Tranſlation:* Examples of which I have often ſeen, particularly in the Fever of 1710, where the Urine turn'd pale, and the Puſtules broke out,

and left the Patients free from the *Fever*, and all its Symptoms. *But if the Reverſe happens*, that is, *if the Fever continues, and Symptoms become formidable*, this is a *fatal Tranſlation*; and, under it, the Spirits will ſink, for 'tis of the laſt ill Conſequence: Here all convenient Helps and Remedies muſt be timely made uſe of, as has enough been hinted at in the foregoing Chapters 'Tis to this Head is referr'd that of *Hippocrates*, *Quibus pellucidæ & albæ ſunt Urinæ, malæ: maximè verò tales in Phreneticis apparent.* L. *Epid.* 6. *S.* 4. *A.* 72.

Hence I conclude, that a *concocted* Urine needs not always *concomitate* a *critical Evacuation or Eruption*; and, in effect, we find it does not; but that however it ought always to *precede* one: And hence I infer, that *Rhodius*, *C* 1. *Obſ.* 28. was miſtaken, when he tells us of a *Petechial Fever*, taken off by a Sweat, tho' the Urine was crude, in the Perſon of *Angela*, Daughter of *Garoderina*, *non prægreſſis Notis Coctionis*. And *Hippoc.* L. 1. *Epidem. Com.* 3. *Ægrot.* 7. Alſo L. 3. *Epidem. Com.* 1. *Text.* 1, 4, *& ſeq. Ægrot.* 3. And *Epidem. Com.* 3. *Ægrot.* 3. makes mention of ſome Obſervations which have Relation to this Head: But whoever conſiders, that in the *Firſt Obſervation*, there was a previous Coction, ſuch as laborious People have, and is ſufficient for 'em, as is ſhewed above; In the *Second*, before the *Delirium Criticum*, (as ſome term it) mention is made of the Urine. And in the *Third*, he ſays, *Urinæ tenues ad judicationem erant*, which followed a Suſpenſion; will find it uſual either to have a Sediment to continue, or, which is very common, to appear crude at the Inſtant, or ſome Time before the Eruption, which entirely takes off the Diſeaſe; and this Date is too late to obſerve what preceded: Beſides, moſt hitherto have believ'd, that where the Matter was entirely depoſited on the Organs or Parts, the Urine was

was then deceitful: This is evident in Pleuriſies, where, before the viſcid Matter is impacted on the *Pleura*, the Urine has a laudable Sediment in it; but when 'tis fix'd on the Membrane, none at all: Nay, ſometimes, in Fever-fits, with a Pleuritick Pain, it is, by all, obſerv'd to be *ſtramineous* during this Pain. *Morton* ſays, *Urina etenim, ut in Spaſmis vehementoribus ſolet, erat clara ac tenuis*; for if the Urine ſettles at this time, the Caſe is very hazardous; becauſe 'tis a Demonſtration of too great Plenty of that Matter in the Blood. In *Elephantiaſes*, if they retreat into the Maſs, as I have obſerved them to do, upon tampering; they create *Aſthma's*, *Colicks*, and many other Symptoms; but when, by a regular Method, theſe again begin to appear on the Skin, the Urine firſt ſhews us they are about to do ſo, by dropping a Sediment; and when this is done, it then ceaſes to ſubſide: For the Blood having parted with its morbid Contents into the Skin, it is freed of them, and ſo is the Urine. And this is a conſtant and regular Proceedure in Nature, as far as I have had Leiſure to obſerve.

I am apt to believe, that the very *Peſtis* itſelf ſeldom begins without a previous Concoction in the Urine. And in effect, *Willichius in Probation. Urinar. p. m.* 300. tells us, that he diſcover'd the *Peſtis* to be approaching from the ἕρον κεφαλῶδες; however, in this Matter, moſt Authors have been ſo ſilent, as to take no Notice of it. Although they would not have the Eruptions expell'd, unleſs Nature had ſhewed the Way by a previous Coction, which doubtleſs muſt be early here: becauſe the the *Bubo*'s generally appear the 4th Day: but at the Time of the Eruption the Urine do'nt always ſettle. Hence *Hippocrates. Aph.* 69. §. 4. ſays, *Quibus Urinæ Craſſæ, grumoſæ, paucæ, non ſine Febre, Copia ex his Succedens tenuis juvat. Tales*

autem maximè prodeunt, quibus ab Initio aut brevi Subſidentiam Continent. For it ſignifies a *total* and *ſalutary Tranſlation.* And this is, as I have hinted above, when the *Criſis* is not very diſtant from the Beginning; and 'tis a regular Proceedure of Nature.

CHAP. VI.

Of the Symptoms.

DE Laſſitudine Ulceroſâ. It is one of the firſt Symptoms that attends any Fevers; and becauſe the Patients complain of Soreneſs, as if bruis'd, therefore 'tis call'd *Ulcerous.* This Soreneſs may proceed from the Miliary Glands, alter'd by the Stoppage. The External Air has Effects enough upon them, to make us think, that, by their Contraction, (and that ſo ſuddenly) the Humours, not having forgot their ordinary Courſe, may ſome way diſtend them beyond their uſual Tone, and may occaſion this troubleſome Senſation of Soreneſs. And what may add Weight to this Opinion will better appear, if we conſider what Symptoms ordinarily ſupervene the too haſty and imprudent Attempts made upon preternatural Evacuations, where nothing is more common than to find the Part, or adjacent ones, loaden with a Quantity of Matter which was us'd to be thrown off by that Port, and producing Symptoms more or leſs prejudicial, in proportion to the Parts and Humours then reigning. This leads me to believe, that Wearineſs may proceed from ſome Plenitude in the Fibres, where Motion is perform'd; for by the Motion of the Blood and Spirits into the Muſcles, or the Stagnation of them there, the Fibres

bres may be over-diſtended, and grow unweildy and unfit for Muſcular Motion; and may occaſion this Wearineſs. But as it requires no diſtinct Methods from the Fever itſelf, no farther need be ſaid of it, than that a *Languid Fever*, and an *Ardent* one, muſt guide us.

A *Vertigo.* The Phyſicians heretofore believ'd it to peoceed from the *Rotatory Motion of the Spirits*; but 'till the Learned *Bellini* took it under Conſideration, the Manner of their Motion was not fully explain'd. 'Tis certain that Objects, whoſe Rays fall upon the ſame part of the *Retina*, appear to be in the ſame Place, or at Reſt. And on the contrary, an Object at Reſt, then is thought to be mov'd, when its Image is painted ſucceſſively in different Parts of the *Retina*, ſuppoſing the Eye unmov'd.

Now, the *Retina* and *Object* are the only Requiſites to be conſider'd, whether an Object really moves or reſts: But when there is a *Deceptio Viſus circa Motum*; an Object appears to move when we know it is at Reſt: Therefore we conclude, that ſince the Object moves not, the *Retina* only muſt move. Which this Gentleman conſidering, immediately begun to think how 'twas poſſible for the *Retina* to be moved; which could hardly fail to occurr to any Perſon who knew the Structure of the Parts ſo well: Such uſeful Diſcoveries Mathematicks can and do make! The Arteries then, when over-diſtended by Accumulation, or the encreaſed Quantity in ſlow or violent Fevers, lift the *Tunica Retiformis* higher than uſual. And this *Dimotion* happens in every *Diaſtole*; ſo that in every Pulſation the Patient becomes *vertiginous* in Proportion to the Diſtention. The Caſe of Drunkards makes this more evident; for having ſtretched their Veſſels with a Quantity of an active Liquor, the Carotid Branches are over-fill'd, and thus occaſion this *Ver-*

tigo uſual to them. But as no Function is hurt by it, no particular Regard is had to the Cure of it, diſtinct from the Cure of the Fever in general; which, as I have ſufficiently inculcated, is as the Motion offending, which indicates the cooler or warmer Regimen and Methods.

Cephalalgiæ, or *Head-achs*, are occaſion'd by Diſtention: For the Veſſels are either ſtretched, from the too rapid Stream of Blood, whence the Veins cannot ſo ſuddenly return the Quantity contained; or from its too languid Motion; from whence it comes to paſs, that the viſcid Particles, clinging cloſe to the Walls of the Veſſels, obſtruct its free Paſſage into the Veins, and conſequently its free Return.

Now, according to theſe differing Manners of being produc'd, the Methods taken ought to be various; for in the former Caſe the Heat is ſharp and remarkable, the Pulſe is ſtrong: And therefore Bleeding is abſolutely neceſſary, to prevent the Rending of the Veſſels or *Hæmorrhages*; and externally we muſt apply a cooling *Epithem* to the Forehead, of *Fol. Roſ. rub. coct. cum Aceto acerrimo in Patinâ ſupra Carbones, cui addi poteſt Sacch. Saturn. ad gr. aliquot*, or ſuch-like, and make uſe of *Opiate Emulſions*, or ſuch gentle *Opiates* as will allay the Pain; for nothing, ſave ſuch Emulſions, with the *Cold Seeds*, or *Syr. Papav.* in Barley-water, are ſafe. And we muſt evacuate the *Fæces* (which, diſtending the *Inteſtines*, preſs upon the *Iliacks*, and hindring the deſcent of the Blood, the upper Parts are loaden in Proportion to this Impediment) by Glyſters of *Decoct. Comm.* or Houſe-Glyſters. But if the Heat be imperceptible, the Pulſe weak and ſmall, the Pain is gravative; for then the Blood gravitates on the Membranes by Accumulation. In this Caſe give *Teſtaceous* and *Volatile* Medicines for the Fever; throw in a Glyſter for the ſame Reaſon as afore-

afore-named; and clap on a large *Bliſter ad Nucham*, to revulſe the Humours from the Head, to add a briſker and livelier Motion to the Fluids, to hinder their Stagnation, and laſtly, to evacuate a Share of the Humours in ſuch a Manner as the Nature of the Fever can allow of.

Deliria are the Dreams of thoſe that awake; and are Incoherences, occaſion'd by a Motion of the Spirits diſproportionate to the uſual Mean of Nature; for if the Spirits, whoſe Motions are in Proportion to that of the Blood, move in too full a Stream, the Tubes of the Brain become over-tenſe; and if they are to few, theſe Channels are not ſtretch'd enough, and their Courſe is interrupted, and the Brain too ſcantily ſupplied. But though 'tis difficult to explain how our Idea's are confus'd, (for Experiment here is impoſſible;) yet Experience evinces to us, that in either State we talk inconſiſtently. *Phrenſies* are the Reſult, of the former; and Simple *Deliria*, of the latter State. However, tho' God has united a Form to a Material Being, and the ſecret Manner of their Communication cannot lie under our Trials; yet we can come ſo near as to ſay, that our *Idea's* are the Spring of our Actions; that theſe *Idea's* are conformable to the Motions of the Blood and Spirits; and that, if the Fluids move on in an irregular Hurry, our *Idea's* and Actions are furious; if calmly, tho' irregularly, they are moderate; *but always, in this Caſe, unreaſonable:* For Judgment and Reaſon are the Product of a certain Proportion of ſound Spirits, and the right Structure of the Brain. The former is evident from an *Exhauſtion* or *Aquoſity* of our Spirits; and the latter, from Prejudices receiv'd by Falls. Whatever then deſtroys the bleſſed Mean God has been pleaſed to place us under, in any eminent Degree, That infallibly impairs our Senſes, and cauſes a *Delirium*.

Deliria then cannot always be remedied by the ſame Methods, ſince the Reaſons of its Riſe differ ſo much. In the former Caſe of *Phrenzies*, the Heat of the Blood is generally pretty remarkable, and the Pulſe is ſtrong, (unleſs the Blood be too much impacted; for then 'tis ſmall, becauſe the Oppreſſion being great, obſtructs the Exit of the *Liquidum Nervorum* into the *Villi* of the Heart; yet the Actions are ſtill furious, they have Strength enough, and their Eyes are inflam'd.) When the Pulſe is under theſe Circumſtances, you muſt Bleed; (where once, often, ſuffices not,) and make uſe of the cooler *Regimen:* Let them ſit up ſometimes; and after a while, give *Lenients*, (if indicated from the Heat abating, and a Sediment in the Uriue;) at leaſt uſe pretty ſharp *Glyſters:* And laſtly, give *Opiates* to quiet the *Vigiliæ*, which are the conſtant Concomitants of all *Deliria*. If Bleeding cannot take Place, (becauſe of their Weakneſs, or the Nature of the Fever,) *Cupping* (at leaſt) will; where four Ounces weaken not ſo much as two from the Arm, though the firſt be arterial, and the latter only Venal: Becauſe, as *Kiel* obſerves, the Contraction and Depletion are, in the former, done in the ſame Time, where there is only a Priority of Reaſon between them; but not often ſo in the latter. And moreover, this ſlow Evacuation gives the Fibres leiſure to contract themſelves by their own Elaſticity alone, without any Expence of Spirits; which cannot be imagin'd in the former Caſe. You muſt alſo apply to the Soles live Animals ſplit, or *Theriac Androm.* to allay the impetuous Motion upwards, or *Pediluvium Fulleri* for the ſame End. I don't approve of *Emeticks*, if the Blood-Veſſels are already over-ſtretch'd; for thus you may impact the Blood ſo violently into the ſoft Subſtance of the Brain, that it will be impoſſible ever to recall it. In Effect, he that conſiders how much, Vomiting

ing haſtens the Circulation, or gives himſelf Leiſure to view a Perſon vomiting, whilſt he is bleeding at the Arm, will be convinced of the Truth of what I ſay. And more-over, I have ſeen the ill Effects of it in *Phrenetick Fevers*, which ought to deterr us from the Uſe of them. It is every-where believed that *Phrenzies* do depend on this Cauſe; which is alſo confirmed by the Learned *Baglivi*. And I remember to have open'd one who died *Phrenetick:* E're I could ſeparate the *Cranium*, a conſiderable Quantity of Blood was ſpilt; and after its removal, I perceiv'd the Veſſels even down to the *Corpus Calloſum* ſtrangely over-ſtretch'd with Blood, and the *Sinus Longitudinalis*, and *Laterales* alſo. This I rather believe to be the Cauſe in furious *Phrenzies:* But the Perſon, I now mention'd, died of a *Comatous Phrenzy*. Some Years ago, I was called to one, who was ſeized with a Putrid Fever: He was Blooded; but the Fever ſhortly turned up to his Head, and he fell into a *Delirium*; neither was his Heat great, nor Pulſe ſtrong. I order'd him a Bliſter: But at my Return from the Country I found him worſe, and perceiv'd him to have rav'd more from the Bliſter, and his Tongue grew drier; and withal, finding his *Facultas Locomotiva* vigorous enough, I order'd him a Glyſter; after which he was Cupp'd, to no effect, for no Blood would come. I then order'd Bleeding in the Leg to ſome Ounces, after which I gave him a mixture of Simple-Waters with *Volatile Salts* (becauſe his Urine appear'd Concocted) and *Laudanum*; to be given at ſuch Intervals as to procure Perſpiration and give him Reſt; and applied *Theriac. Andromach.* with *Ol. Mac. Chym.* to his Soles. And thus in three or four Days his Pulſe grew ſtronger, his Urine ſettled compleatly, and he recovered.

But

But where the Heat is ſmall, and the Pulſe is weak, and they grow Feeble, with Subſultus Tendinum, *and Coma's*, then you muſt ſteer another Courſe: You muſt apply Bliſters to the ſeveral Parts, as the Neck, Arms, Wriſts, Thighs, and Calves of the Legs, and *Emplaſtra* or *Cataplaſmata Solearia*, or irritate the Fibres to continue on the Circulation without Interruption, and internally muſt give all the Medicines requir'd by the Nature of the Fever to ſupport the drooping Spirits. One Thing Obſervable in this ſort of *Delirium*, is, that juſt before they rave, and while it laſts, the *Pulſe* is generally much *eclipſed* and *deficient* I could mention ſeveral recover'd under theſe Circumſtances, whoſe *Fæces* and *Urine* dropp'd involuntarily, and whoſe *Extremities* have been almoſt cold, as I have hinted above. In all *Deliria*, Care muſt be taken to know what becomes of the *Fæces* and *Urine:* Heedleſneſs, at firſt, may cauſe them to neglect to urine, which the Fulneſs of the Bladder may afterwards hinder; for that the Power of the *Detruſor Urinæ* being leſſened, from the lateral Preſſure encreas'd, the *Sphincter* is leſs preſſed upon; and thus the *Facultas Retentrix* becomes ſtronger than the *Expultrix*, (to expreſs it in the Language of the Antients.)

Convulſions are involuntary Motions of the Muſcles: They, in their ordinary State, are ſubject (by a moſt wonderful Providence) to an *Imperium Animæ*; and they are not mov'd but by a joint-Influx of the Blood from the Arteries, and of Spirits into the Fibres. This is the Reſult of Experience: For, tie the Crural Artery of a Cat at the *Inguen*, and by this the Influx of the Blood is impeded into the Leg, ſhe immediately loſes all Motion on that Leg, below the Ligature. Again, tie the Nerve of the contrary Thigh, and ſhe then alſo loſes the Motion of that Leg. From which Experiments 'tis evident,

evident, that neither the Blood nor Spirits alone, but a concurrence of theſe Juices, (or ſome *Airy Elaſtick Corpuſcles*, (compos'd of theſe Juices,) will inflate and move the Muſcles. Now, if equal Parcels of theſe Liquids are diſtributed into the *Antagoniſts*, and equally inflate the *Area* of their *Rhomboidal Veſiculæ*, then theſe Muſcles act equally, and the Part is kept in a Tonick Poſture: But if either Muſcle has a greater Quantity pour'd into it, That is contracted, and its *Antagoniſt* is relaxed; and, *vice verſâ*. 'Tis plain then, where-ever the Ballance lies, there will the Motion be perform'd: But this being alternate in common Convulſions, will be alternately (but always irregularly) mov'd, that is, convulſed. This may either depend upon a violent Motion of the Fluids, or one too languid; for in the former, the Fluids, as in the latter, are irregularly mov'd. In a ſtate of Health, unleſs we command them, they are quiet, and the Fluids are only diſtributed to them in ſuch a Quantity as may ſerve for Nutrition: But when that Mean is loſt, by Depravations in their Qualities, or Changes in their Quantities, their regular and ſtated Motion is ſucceeded by another impelling Cauſe in the Tubes, of a different Stamp from that which is ſubject to the Will. This is true in particular as well as in univerſal Convulſions.

Bellini ingeniouſly takes Notice, that where there is ſuch a *Paucity of Spirits*, as that they cannot equally inflate the Muſcles at once, there may happen a *Momentary Palſy*, which bears the Reſemblance of a *Convulſion*. But this is what happens in dying Perſons in Fevers; for where one Muſcle is ſo ill ſupplied with Spirits, as that their Courſe is often interrupted, for want of a ſufficient fulneſs of the Channels; then, where-ever that Defect lies, that Muſcle flags, and loſes its *Æquilibrium*; and the other, which has more, is contract-

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ed or convulſed. Hence are theſe *Subſultus*, at the End of Fevers; and the *Diſcovery of this Palſy*, is from the Weakneſs of the Pulſe, as well as the imperceptible Heat of the Patients at this Time; and then too they ſeldom want *Comatous Deliria*, and other fatal Symptoms. But where the Perſons are ſeized with Convulſions under a *ſtrong Pulſe*, and a *vigorous Warmth*; then we may conclude, that theſe involuntary Motions evene from the too great Plenty of the Fluids irregularly mov'd. Hence, in ſhort, it may be concluded on, that Bleeding and *Sal. prunell.*, *Opiates*, and the *diluting* Medicines, are neceſſary in the *latter* Caſe: while *Bliſters*, *Volatiles*, and the *warm Cephalicks*, are Remedies in the *former*.

I cannot then ſufficiently wonder at the Road of ſome Practitioners; who, whenever they preſcribe to convulſed Patients, are ſure to croud in all the ſtrong *Hyſtericks*, without any Regard to Conſtitution, which ought always to be our *Cynoſura* to ſteer by. I know a Lady, who is Crampt upon the Autumnal and Vernal Changes: She cannot bear the Heat of the Fire, without the Danger of being drawn up; and who, upon the common *Anti-convulſives*, was thrown into the very Fits ſhe was labouring to prevent: She is of a hot Conſtitution, a quick Wit, and her Pulſe and Warmth are quick and ſtrong: But the cooler Methods, of a Milk-Diet, *Sal. prunell.* nay, even *Sp. Nitr. dulc.*, allay them. I ſhall mention one Obſervation more, to confirm, that Convulſions are cured chiefly by a Regard had to the Temperament: I had a Patient, who was ſeized with that Species of Cramp, called *TRISMOS*: She had juſt ſo much Room left, as that ſhe could be nouriſhed with Liquids. However, her Mouth was ſo violently ſhut at ſome Times, that ſhe was forced to uſe a Wooden Wedge to keep it open. The Difficulty I labour'd under,

was,

was, how I ſhould diſcover whether this could be called a *Palſy* of the *Digaſtrick Muſcle*, or a *Contraction* of the *Crotaphites*. I found that the Diſtinctions, given in by *Riolanus*, and ſome others, miſ-led me; for having applied a *Bliſter* to the *Nucha*; as ſoon as this began to have its Effect, I was made very ſenſible of my Miſtake; for it threw her into Cramps in her Arms and Legs. Upon this, I had Recourſe to a different Method, and gave her what would not heat her, along with *Opiates*, at due Diſtances; whereupon ſhe grew daily better; and in ſix or ſeven Days open'd her Mouth perfectly well. This, beſides many other Arguments, convince me, that Convulſions are not to be taken off, without a due Regard to the Temperament. The beſt Diſtinction I made uſe of, to diſcover whether this was occaſion'd by a Palſy of the *Digaſtrick*, was thus, I perceiv'd that the *Digaſtrick* did move the Jaw a very little downwards, which a *Paralytick* Muſcle could not have done.

Lethargi, *Catalepſes*, *Cari*, *Comata*, *Apoplexiæ*, are profound Sleeps, and Degrees of them, which I ſhall not ſtay to name. Senſe and Motion depend on a certain Diſtribution of Spirits into the Organs, without which 'tis impoſſible for them to act: And an Interruption of theſe Senſations and Motions depends upon a Stop put to theſe Diſtributions. Now, if the Blood gravitates on the Membranes, the Medullar Subſtance, and the Origine of the Nerves, 'tis evident that the Paſſage of the Spirits muſt be obſtructed; that there muſt be a Privation of Senſe or Motion, nay, of both; ſince either are but a Conſequence of ſome Degree of an interrupted Stream of this Fluid into the Parts. This Caſe may happen from either State of Blood: For, how frequently does it occurr, in the beginning of Fevers, along with a ſtrong Pulſe, that a *Sopor* happens? Now this cannot fall out without an Accumulation,

mulation, and, conſequently an Oppreſſion of the Parts affected. If the Pulſe is ſmall, ſome Particles of the Blood are propell'd 'till the Arrival of others; and the ſlow Motion heaps up too much, at leaſt, more than can be re-conveyed in a ſeaſonable time; ſo that it gravitates, oppreſſes, and obſtructs the Paſſages. And thus the Spirits are not rightly diſtributed to the Parts, and, conſequently, Motion and Senſe are prejudic'd; and the natural Sequel is one of the above-named Symptoms, in Proportion to the Cauſe. I don't at all queſtion, but this Oppreſſion may often happen, from an Obſtruction ſomewhere in the *Infundibulum*, or its ſubjacent *Gland*, from a viſcid Matter impacted; and then the Ventricles fill with Serum: And, in Effect, I have ſince remark'd, that *Lower. de Corde, p. m.* 71. takes notice of this very Caſe: But this Sort, I am apt to believe, oftner, if not only, occurs in Chronical Caſes; as do Convulſions, from the Suppreſſion of an uſual Flux from the Noſe, which I have ſeen ſo fierce, as to pervert the *Axis* of the Sight, to convulſe or contract the *Infundibulum*, to hinder the Return of the *Lympha* from the Ventricles, to fill the Brain with Serum, and to deſtroy.

The Difficulty of the Cure depends on the Degree of the Impaction, which is often irrecoverable; becauſe the Veſſels are ſometimes broke, and Blood is extravas'd on the Membranes, or even driven into the *Cortical* and *Callous* Suſtance of the Brain: And as 'tis impoſſible to recall this, into the Circulation, Death is inevitable; but where the Fulneſs of the Veſſels only occaſions it, then Evacuations are to be made uſe of: And becauſe too much Blood is heap'd up, therefore, in the former Caſe, large Quantities of Blood are to be drawn off, from the *Jugular*, (as being an immediate Drain from the Part affected) upon a double Account; which

is

is that of the *violent Motion*, which hurries in, *too large Supplies*, to the Quantity already lodg'd: And thus we anſwer the two-fold Indication of diſcharging the *Load*, and allaying the *Commotion*; by which laſt, freſh Supplies are cut off. Here too 'tis uſual and uſeful to apply Bliſters; for tho' they are really contra-indicated, with Regard to the violent Motion; yet, where we are oblig'd to riſque a ſmall Damage, for a great and certain Advantage, Reaſon will inſtruct us to ballance the Scale: For the ſtrong *Oſcillations* of the *Membranous Fibres*, by which the Fluids can be *hurry'd forward*, are more than a Ballance for the *Commotion* they add to; for, by them, the Capillaries are ſqueez'd, and their impacted Contents are driven forward, from a Conqueſt over all the Reſiſtances. As to the Reſt, 'tis well known, that Apoplecticks with a Plenitude, and in hot Caſes, bear no Volatiles, but require *Sulph. Vitrioli.* and ſuch cool Medicines.

Dr. *Cole* is very laviſh in original Appoplexies; but the Fever being *prior* to the Symptom, obliges us to be wary here, in the Quantity drawn off. In ſhort, if the Stomach is laden with any *Saburra*, *Emeticks* are very proper, as alſo *Cathartick*s are to be us'd; and (if occaſion requires) *Sternutatories*. *Dekkers* orders very ſharp Glyſters, ſo far as to cauſe Blood to come away. *Bayle*'s Caution about *Emeticks*, and *Sennertus*'s about *Sternutatories*, are not without Grounds, which are theſe: Where there is a *Plenitude ad Vaſa*, the Succuſſions, (whether by Externals or Internals) may hazard the Rupture of the tender Veſſels of the Brain, which are of themſelves too flexile; and as the Subſtance of the Brain is ſoft, and yields to any, even the leaſt, Impulſe; the Conſequence of ſuch an imprudent Proceedure would be an irremediable *Effuſion* and Death. Where theſe Diſorders happen to the *weaker People*, to the *ſedater Fevers*, with

with *ſmall* and *languid Pulſes*; *Bliſters* are the ſafeſt Remedies, along with *volatile* Medicines, to rouze them, and add Vigour, as Experience has convinc'd us; for otherwiſe you take off the Diſeaſe and the Diſeaſed together. 'Tis neceſſary to conſider how *Fevers*, if *Epidemical*, terminate; for if they end in ſuch dangerous Symptoms, it will be neceſſary to prevent them, if you are call'd early enough. As to thoſe *Apoplexies* occaſion'd from the *Ventricles* fill'd with *Serum*, the Diſcourſe appertains not to this Place; neither do I ſee any Method whereby to evacuate this fatal Plenitude.

Watchings are the common Reſult of either State; and whether the Motion be too violent, or too ſlow, they generally are watchful: 'Tis indeed, in the former Caſe, more uſual to hear them complain of a *Pervigilium*; and this alſo is commoner, where any Eruptions are about to enſue. Sleep ſeems to depend on a Quantity of Blood, not circulating freely: Our natural Actions require and preſuppoſe a Stock of animal Spirits: And a State of Quiet, free from the Hurry of a Blood variouſly agitated by our Muſcular Motion, is the fitteſt Opportunity to have them recruited. We cannot well doubt how ſuch Quantities are ſtor'd up, if we take a view of the Structure of the Brain, and its Bulk, in proportion to the Nerves that run from it: For if the whole *Syſtem of the Nerves* were quoyl'd up, they would hardly amount to the Bulk of the *Thalami nervorum opticorum*; from whence it may be inferr'd, that theſe large Protuberances, at the *Exit* of every Nerve, muſt be ſo many Tubes, turgid with almoſt an Overcharge for the Fibrils of thoſe Nerves that are without the Brain; ſince each Thread of every ſuch Nerve is but Productions of the former, and not more numerous than they: And thus the Brain is a Fountain of Supplies. Hence the Stock bred in Sleep, is, in Proportion to our Exerciſe,

Exerciſe, expended and exhauſted, in the Day-time, by every Action. Now, as the Expence is conſiderable, the Fibres muſt ſink in their Dimenſions; and, containing leſs Fluids, will approach nearer to a Contact. Thus 'twill fall out, that our Body will naturally ceaſe from Action, that the Entrance to the Particles of Blood will be ſlow, and this Liquid will be heap'd up in the Brain, and the change of Poſture will eaſily retard the Circulation, 'till the Brain, again turgid, reſtores it, and then we awake. Thus 'tis likely that Watchings conſiſt in a certain Tenſeneſs of the Fibres of the Brain; and as too rapid a Motion fills the Tubes and keeps us awake, ſo one too ſlow, makes me believe the viſcid Particles (which are the Vehicle of the Spirits) are too groſs to enter the ſmall Fibrils of the Nerves without the Brain, and it may be kept ſtretch'd with an Overload, whilſt a *Penury* is evident without it: And thus Convulſions often happen from an unequal Diſtribution of Spirits to the Parts. And here 'tis evident, that ſome Nerves are often obſtructed, whilſt others are too plentifully ſupply'd, and all the while the Origin of Senſation is confus'd: For what is more common than, in, *Delirium's* to be afflicted with *Subſultus Tendinum*, and *involuntary Effuſions* of *Fæces* and *Urine*?

The Cure of Watchings, is perform'd by correcting the Motions. For Bleeding (repeated as requir'd) in the *Ardent* Sort, leads the Van; it ventilates and hinders the too plentiful Afflux to the Brain. Diluents are here neceſſary too, from the Nature of the Fever, and *Syr. Papav. Rhæad.* in Barley-water, or *Emulſions*, are requir'd. And we muſt proceed thus, till we gain our Point; for as *Symptoms are Arguments of the erring Motions*; ſo long as they laſt, we muſt perſiſt in proper Methods adequate to the Ailments. Sleep is the beſt

Concoctor of Humours: For *Sanctorius* tells us, *Dormientem plus perſpirare Vigilante*; he only means, if moderate; becauſe he tells us, *Per nimium Somnum Interiora & Exteriora frigeſcunt.* If the Watchfulneſs proceeds from an oppoſite State of Motion, 'tis very conceivable, that *Opiates* are dangerous: And indeed, I never have found Them given in ſuch a Caſe, but that, after the Adminiſtration, they grew more languid and faint; their Tongues became drier; their Pulſe weaken'd; *Gravative Head-achs*, and *Delirium's* did ſupervene, along with *Subſultus* and *Coma*'s, and all the Tokens of a Failure of Spirits; and therefore, in this Caſe, 'tis only ſafe to truſt to the *Bliſters*, along with the *volatile* and *teſtaceous* Medicines requir'd by this State of *Fever*.

Vomiting is an immediate Reſult of a Convulſive Motion of the Coats of the Stomach, along with (if not only, as the ingenious Dr. *Purcell* ſays) a Convulſion of the Abdominal Muſcles; ſome extraneous Matter, ſpued from the Glands into the Cavity, galls its Walls, and invites a copious Influx of the Spirits, and convulſes it to exonerate; for *Evacuations are a conſtant Conſequence of Irritations.*

I have ſeen a *Cholera* proceed from Excoriations along the Canal of the Stomach and Inteſtines. This often happens to Children who have the *Aphthæ*, and an Evacuation of green Choler. I ſaw this once happen to a Lady, in the Year 1699, who had labour'd under the *Flux-Pox*, and who, after the *Deſquammation*, fell into a *Hectick*; ſhe, (before any thing was taken) fell into a Vomiting and Purging, and voided vaſt Quantities of Scales, along with a Brown *Sanies*; till, at laſt the *Gula* and Parts about the *Pharynx* were ſo excoriated, that ſhe refus'd to take any Thing; expreſſing her Choice

Choice of Death, rather than ſhe would undergo the Rack of ſwallowing.

Whether this Symptom be under the *Ardent* or *Hectick* Sort of Fever, ſomewhat muſt be ſuperadded to theſe Medicines, for correcting the ſharp Particles extravas'd; as alſo ſuch Medicines muſt be given as will allay the Irritations, ſuch are *Opiates*, &c. *Riverius*'s Mixture is very good (viz. *Succ. Limon Cochl.* j. *Sal. Abſinth.* ℈j.) or if Cordial-Waters, both ſimple and compound, along with *Teſtaceous* Medicines (and *Opiates* in violent Vomitings) be added, 'twill be more effectual. But it often happens to be a *Critical Effort*, as *Alleviation*, and the *concocted Urine* do teſtify; and then we may encourage it with gentle *Emeticks* of *Pulv. Rad. Hypocacuan. Sal. vitriol*, &c. but even Chicken-Broth is ſufficient, where there is a great propenſity to Vomit: And when you have emptied their Stomach's enough, then give the *Anti-emeticks* above-named. As to the Vomiting from *Excoriations*, nothing conduces in it, ſave the ſmooth, *mucilaginous*, and *glutinous* Medicines; as I have found in a Gentlewoman, who, from a ſtrong *Emetick* given, threw up a *Scirrhous* Piece of Fleſh which had grown on the Stomach; after which ſhe could retain nothing, ſo long as the *mucilaginous*, *oily*, and *opiate* Medicines; but neither them in any Quantity. And ſo we ſee, how, in common *Aphthæ*, the *Gargariſm Alb.* cures them, they proceeding from the eroding Particles of the *Saliva*, which this *Gargle* ſucceſsfully obtunds.

Dyſenteries, or *Diarrhœa's*, may accompany all Sorts of Fevers. I have already ſaid, that Evacuations preſuppoſe an Irritation, and it is therefore, by all, aſſign'd as one of the firſt Cauſes; and 'tis probable, that ſome Particles, flowing from the the Blood, are depoſited in the Inteſtines; and that, by this *Stimulus*, the Motion of the Blood is deter-

min'd thither by the forcible Contraction of the Membranous *Villi:* From whence it is manifeſt, that the *Tubuli*, and Channels of the Veſſels are fill'd and ſtuffed with a Quantity of Blood. And the more flexile the Guts are, and the more incapable they are of any ſtrong Reſiſtance, the eaſier they yield to the Moment of the preterfluent Blood, and the more they are ſtretch'd; from whence will follow an Effuſion of their Contents. The greater the Diſtraction is, the greater will be the Quantity, which will be thrown off: A leſs Diſtraction will only give an *Exit* to the thinner Particles, but a greater, to the Blood itſelf. However, unleſs a general Plenitude gives Riſe to a Flux of Blood, it commonly happens from an Inflammation of the Parts, and ſometimes 'tis a Sequel of a Critical *Diarrhœa.* Effuſions of Blood are of known Danger, ſince even *Diarrhœa's* are eſteem'd of ill Conſequence, eſpecially if the Perſons are weak, the *Flux* be ſymptomatical and plentiful; or if they come upon any Eruptive Fever, ſo as to weaken. Drink *Decoct. Alb.* in both Caſes; give the *Teſtaceous Powders*, and even *Opiates*, ſuch as *Theriac. Androm. Diaſcord. Fracaſtor.* &c. If Bleeding can be bore by the Patient, 'tis requir'd in a *Dyſentery.* A *French* Gentleman, of the *Society*, brought over from *Cayenne*, in the Year 1710, a Root (or Wood) of the Figure of *Bryony*, ſo porous, that in a piece of eight Inches in Length, a Candle might be blown out through it, which effectually rakes off a *Dyſentery* in two Doſes; as I have had Occaſion to make Trials in the preſent Caſe, which produces no other Change, ſave immediately checking the Flux: A Specimen of which I made a Preſent of to the curious Collecter of ſuch Rarities, the Hon^d. Sir *Hans Sloane* Bar^t. M. D.

Colicks,

Colicks, Iliack Paſſions. It does not always happen that theſe Pains depend on Inflammations of the Guts, (as *Screta* will have it;) for it does not conſtantly fall out that the Pain is fix'd in one Spot, nor that the *Fæces*, in paſſing, create a Diſturbance; on the contrary, it comes to paſs that there is an Obſtruction (partial or total) of the *Fæces*, and the Pain runs from one ſide to the other, as the Tract of the Gut lies, which ſhews that there is another Cauſe. In Fevers, the Heat of the Parts (depending on the Juices that paſs through them) has an Effect upon the Juices, *&c.* that lodge in the Cavities: And Conſequently, whether there be any Phlegm ſticking to the Coats, or *Fæces* in the Paſſage, this Heat can raiſe the one into *Bullæ*; (for Water and *Serum* we know, can be rarefy'd into Air) Part of which fills the Cavity; whilſt the Bulk ſticks to the Inteſtines, and inflates 'em; or the Humidity may be evaporated from off theſe Coats, and the *Fæces* may ſtick in their way, downwards; and may, in Proportion to the Drineſs of the Fibres and *Fæces*, produce an Obſtruction; and as there is a Detruſive Motion, by a *Periſtole*, more is heap'd up, the Parts are more diſtended, and the Pain becomes leſs tolerable.

So far as the Cure of this Pain is Contra-indicated by the Remedies proper for the Fever, ſo much Danger it carries along with it; becauſe we are often forc'd to have recourſe to Evacuations, which retard a Regular *Criſis*; or to Obtunding Medicines, which are as Dangerous as Evacuations.

If we find that the Pain is fix'd about the Navel, that they paſs the *Fæces* with Pain at a certain Place; that the *Fæces* change their Figure; that Breathing affects the Place, and the Pulſe be very vigorous, we may may conclude 'tis an *Inflammation*. In this Caſe, you muſt Bleed as much as the Strengths of the Patient will allow, and repeat it as Occaſion

requires. Throw in Emollient Glyſters frequently, which ſerve as Fomentations: Give 'em Cooling Emulſions warm'd, and gentle Anodynes. If it proceeds from any other Cauſe, and if Glyſters do'nt anſwer, as they never do, when the *Continent Cauſe* reaches higher than the Beginning of the *Colon*; then Recourſe muſt be had to ſuch *Cathartick*s as, we judge, will have their deſired Effect: And becauſe, by this neceſſary Method, we endanger the Regular *Criſis*, by weak'ning the Patient; therefore we muſt have Recourſe to Opiates, for allaying theſe Contractions along with ſuch *Alexipharmacks* as the Caſe requires: And if it yet mounts higher, as it does in the Iliack Paſſion, *Opiates* ought to be mix'd (as the prudent *Riverius* adviſes) along with the *Purgatives*, and *Mercurius Dulcis* too.

Nauſea; *Anorexia*. The firſt, I take to be a Diminutive Vomiting. The latter, indeed, depends on a certain Structure of the Stomach, as well as a certain and determinate Quantity of an *Eſurine Juice*; for an *Atony* or a Defect of this Natural Juice (whoſe Nature is chang'd to an *Exotick* one, and ouzes into the *Sac*) deſtroys the Appetite. Whenever we find the Patient ſeiz'd with theſe Symptoms, (after the *Horrors*, which ſeize *prior* to all others,) then a gentle *Emetick* is very convenient; or, if the Patient cannot bear one, a gentle *Lenient* may ſuffice: Which ſometimes may be repeated, 'till the Symptom abates: And thus, too, the *Fomes* of the Fever is leſſen'd, and prepared for farther *Alexipharmacks*.

Thirſt, or the Senſe of a Want of Liquids, generally bears a Proportion to the Drineſs of the adjacent Parts to the Mouth, unleſs they be *Delirious*. The too violent Circulation hinders the Secretion of the *Saliva*; or the too ſlow makes it Viſcid; and the Lungs contribute to it too, by their hot *Effluvia* through the Noſe and Mouth. In the *too violent*

Commotion

Commotion of the Blood, *Acids*, with *Watry Medicines*, do beſt; then *Barley-Water*, with *Juice* of *Lemons*, *Sal. Prunell. Claretum Cober.* Water and Toaſt are here moſt proper. But *where the Spirits are weak*, theſe are ſo far from abating it, that they clog 'em more; and then 'tis beſt done by *Thea*, *Sack-Whey*, and ſuch Materials as will open the Glands.

Horrors, *Rigors*, are thoſe Shiverings from whence we date a *Fever*, or ſuch as come on at the *Criſis:* They are Convulſive, (ſhall I ſay, or Paralytick?) Affections of the Muſcles, from the Irregular Influx of the Spirits into the Fibres; which are either oppreſs'd or detatch'd irregularly, and ſo are a Bar to the Circulation in the Extremities, or have ſome Acrimony in 'em that occaſion this Irritation. If they continue long, you are oblig'd to give 'em *Volatile* Medicines, *Brandy-Spirits*, or warm *Wine.* They are not always Attendants on the firſt Paroxyſm; but in Malignant Caſes, and before great and Critical Sweats, they frequently come on.

Pains, are troubleſome Senſations, ariſing from ſome diſproportionate Object inhering in the Part affected, or periodically thrown there: And as this may be either in the muſcular or nervous Parts; ſo the Cauſe may affect either; but with very different Conſequences; the one not having ſo exquiſite a Senſe as the other, will not produce ſo dangerous Sequels, nor require ſo potent Remedies. Now the Cauſe which produces theſe Pains in different Parts, may be one and the ſame, and may be but the Reſult of the different Variations of the Texture of the Fluids, or their Quantities, metaphorically increas'd: For as, in the firſt Caſe, the viſcid Particles of the Blood are forc'd through the Capillary Veſſels, with ſome Difficulty, in proportion to the Senſe of the Part; the Pain is proportio-

nable to the Diſtenſion of the Fibres beyond their uſual Tone: So, in the latter, the Diameters of the Veſſels being over-and-above enlarg'd, become an Impediment to the Circulation, over-ſtretch the Parts, and occaſion the ſame Diſorder: But in Spaſmodick Pains, the Caſe is very different, theſe being Cramps, or painful Contractions of the Muſcles, from ſome irritating Cauſe; theſe are the divulſive, jerking Pains, that draw the Muſcles into involuntary Motions, and commonly have *Subſultus* join'd with them. Sometimes Pains in Fevers are more Epidemical than at other Times, from the Nature of the Air's Rarefaction (abſtracting from any other of its Qualities:) For as it is obſerv'd, that a Bladder, half blown, ſwells, upon pumping; ſo alſo it is remark'd, that Animals ſwell, upon pumping too, in a *Ratio* to the Quantity drawn off; ſo do all Liquors follow the ſame Meaſures. Thus, in warmer Weather, the Denſity of each particle of Air being leſſen'd; the Blood in our Veſſels, in Proportion, rarefies and diſtends, and ſtops in the Capillaries; and according to Mr. *Boyle*'s Obſervations, upon his own Hand in the Air-Pump, violent Pains ariſe. But whatever is the Original of theſe Pains, *Opiates* are always one Requiſite to allay them. If the Pain be Inflammatory, Bleeding ought to be made uſe of, and repeated as often as it is neceſſary; and afterwards we muſt give Attemperants and Diluters of the ſizy Parts. If the Pains are purely *Spaſmodical*, ariſing from diſorderly Motions in the Spirits, *Opiates* (with *Volatiles*, if the Spirits want rearing) are the proper Remedies. If from particular Acrimony lodging any-where in the Stomach, as in *Cardialgiæ*, then the *Teſtaceous Pouders* are convenient.

Verminous Fevers are of all Sorts; and, over-and-above the Medicines and *Regimen* indicated by the Fevers themſelves, you muſt add the *anti-helmintic* Medicines.

Medicines. There are no Symptoms which they do'nt introduce; and whenever Symptoms evene that are ἄτοπα, or referrible to no Head, we ought to ſuſpect Theſe. The Nature of the Fever diverſifies the Vermifuges; for that, in the *warmer Kind*, *Coralline*, and ſuch-like, are only Proper; whereas, in the Hectical Sort, *Ens Veneris* is a noble Medicine. I was call'd to ſee a Boy, Four Years Old, who had fallen into a high Fever, with a *Delirium*: Immediately upon Seizure, I order'd him Bleeding, and cool Emulſions, which took off the violent Commotion and *Deliria*; and when the Child came to himſelf, he complain'd of a violent Pain in his Belly, an Itching of his Noſe; and the Mother perceived the Startings, with the Gnaſhing of his Teeth, when aſleep. I order'd ſome *Vermifuge* Medicines in an *Electuary*; upon which he voided a large Worm, and the Fever ceas'd, and he recover'd. Every little Symptom of Worms ought to be ſuſpected, and provided againſt, ſince theſe Medicines, well ſuited, are not contra-indicated by the Fever. And thus I have immediately (tho' much contrary to my Expectations) cur'd ſeveral advanc'd in Years; and particularly a Gardiner above Fifty Years old, who complain'd of ſome Symptoms which ſeem'd to argue that he was troubled with Worms; upon blending *Vermifuges* along with the Medicines proper for his Fever, he voided ſuch Quantities by the Mouth, that he had almoſt been choak'd by them.

Puerperal Fevers are Shelves the poor Females are often ſtav'd upon: They are generally Inflammatory, from the Inflammation of the *Uterus*, which ariſes from the Suppreſſion of the *Lochia*. Cuſtom has prevail'd among the ignorant or obſtinate Midwives, to allow the *Laborants* Chickens, and ſuch Fleſh-Diet, as they pretend cannot prejudice them; to riſe out of Bed three Days after their Labour, and

and to take ſome Turns a-croſs the Chamber; from whence I have ſeen the *Lochia* ſtopt or leſſen'd, and thence have aroſe *Deliria*, or dangerous Fevers; and yet 'tis eaſy to prevent theſe, if the Ladies can be Aw'd. 'Tis common for hard Labours to produce them, as I have often known. If we are called in immediately after the Miſtake, it may be prevented, by adminiſtring *Tincture* of *Caſtor*, or *Spirits* of *Hartſhorn* in *Rue-water*, &c. and giving them their Diet warm, and ſo diſpoſing them to Sweat. But when the Fever is begun, if they be *Plethorick*, and the *Fever* of the *warmer Species*, Bleed in the Arm, and then in the Foot; and after this, throw in emollient Glyſters to dilate (by the Manner of a *Fotus*) the Orifices of the Glands of the *Uterus*, whence the *Lochia* will flow afreſh. *Alexipharmacks* (with the Cautions above-nam'd) muſt be given, and the Diet ſhou'd be cooling or refreſhing. If Inflammatory Symptoms come on, ſuch as *Pleuriſies*, *Angina's*, *Peripneumonies*, *&c.* you will ſee below how to treat them.

If the *Lochia* are paſt; Bleeding and Purgatives (if indicated) may ſafely enough be made uſe of, as I have often experienc'd.

Inflammations, (ſuch are *Pleuriſies*, *Peripneumonies*, *Pneumo-Pleuriſies*, &c.) ariſe from a viſcid Blood ſtopping in the Capilaries, and diſtending the ſenſible Parts beyond their ordinary Bounds. Now 'tis conceivable enough how this happens; for if we conſider the Structure of the fleſhy and membranous Parts, we ſhall find that their original Contexture is *Reticular*; ſo that a Bar put to the Motion of any Moment of Blood, will ſwell and enlarge the Fibril that contains it, by the Quantity that follows. This Encroachment upon the neighbouring Fibres will alſo ſtraiten their Channels; and thus hourly the Infringment encrea-

ſes,

ſes, and, in Proportion to the Circulating Maſs, the greater will be the Impaction. The larger the Diſtenſion, the more intenſe the Pain will be; 'till at length, by Art, or Quantity, the Veſſels are ſtretch'd with fermenting Contents beyond a Poſſibility of containing more, and then they *Impoſthumate*, and create *Abſceſſes*, by the Matter extravas'd, from a Breach of the Fibres, into one common Receptacle.

In all ſuch Diſorders, plentiful Bleeding is abſolutely neceſſary; for whether we conſider that the Pain raiſes and keeps on foot a violent Fever, or whether that the Riſque of Impoſthumation is run, for the Want of it, 'tis upon both Heads indicated, In which 'tis far from being neceſſary then only to ceaſe, when the Sizy Blood appears no more; for thus we ſhould act blindly; ſince this Blood ſometimes appears not, from the very manner of Bleeding; for in a ſmall Orifice, thoſe Drops that fall into the Diſh coagulate too ſoon to ſwim on the Cake, as this Size does, as being lighter, and conſequently, loſes the Power of mounting; but alſo the Pulſe ought to guide us in the Evacuation. Give 'em the cooling Ptiſans of *Barley-water*, *Liquorice*, *Raiſins*, and *Figs*; in order to diſſociate, and divide the Proximity of the dilaniating Salts; and to obtund and dilute 'em: Give 'em *Sal. Prunell.* in their Liquors; which will ſheathe the Acrimony of the Juices; but avoid *Acids*, for fear of further Coagulations: Give 'em *Linctus*'s of *Ol. Amygd. d. Syr. Capillor. vener.* and *Sal. Prunell.*; which Mixtures contribute to blunt the pungent Salts; and if the Matter be lodg'd in the Suface of the *Bronchiæ*, they are alſo conducive to give a juſt Conſiſtency to the *Sputum*, to diſengage the *Adheſion*, and to promote an Eaſy *Expectoration*: Give Cordials of *Aq. Lactuc. Paralyſ. & Syr. Violar.* a-long with ſome gentle *Opiate* of *Syr. Papav. Rhœad.* and ſuch-like, for ſupporting the Spirits, and

and allaying the troubleſome Senſations uſual in ſuch Inflammatory Caſes: We may anoint with any *emollient* and *diſcutient Ointments*, which will relax the Parts, become too tenſe by the impacted Humours. Care muſt be taken of catching Cold, which I have found, even when Affairs went well, undo all. I have known ſome *Pneumo-Pleuriſies* ſo quick as to ſpit Blood of a bilious Colour from the Moment they were ſeiz'd; but ſuch carry great Hazard along with 'em, eſpecially if the Patients are of a full Habit, or have got it by a Debauch: and theſe are what *Jodocus Lommius* calls *Eryſipelas Pulmonum.*

To know whether a Pleuriſy be an eſſential one, or the Symptom of a Fever, is very neceſſary to a Phyſician; the Want of which Scrutiny, has coſt many Lives. I remember to have been call'd to a Young Man who was ſeiz'd with the Symptoms of a Fever, (*Rigor, Head-ach, Nauſea, Faintneſs, Heat, and Quickneſs of Pulſe*;) he took, as the Cuſtom prevails, a little *Theriac. Androm.* to raiſe a Sweat: It had the deſired Effect, and he had the Remiſſion of half a Day; but venturing abroad, in the Afternoon he was ſeiz'd with a Pain in his Side; for which the Aſſiſtant, taking it for an *Eſſential Pleuriſy*, bled him plentifully; (he never ſpit Blood, as far as I could learn;) after which he gave him *Phyſick*, and then relied on *Pectorals*. I was deſired by the Apothecary his Maſter, to viſit him: I found the Symptoms as I have deſcribed them, along with Bliſters rais'd on his Hands alſo; he was *anhelous*, with a *Pulſus myurus*, a dry black Tongue; *comatous*, and with *Subſultus*; and, in fine, he was attended with all the Symptoms of a fatal Fever, of which he died the Day after. The Diſcovery is thus: Any *Diſorder* is *Symptomatical*, when it ſucceeds another preceding Diſeaſe; when the Symptom encreaſes or remits as the Diſtemper that firſt ſeiz'd does;

does; and when the Symptom is periodical. As to the particular Caſe in Diſpute, *Sydenham* tells us, *p. m.* 223. *In tali Caſu Symptomata Febris, Capitis Dolor, Artuúmve præcedunt; Expirante Pleuritide durant.* And again, *Ballonius Epidem. fol.* 238, ſays, *In omni Febre Eſſentiali cum junctus eſt Dolor Lateris; Febre auctâ, Dolor augetur; at in verâ Pleuritide; augetur Febris, aucto Dolore.* The Reaſon of ſo careful a Diſtinction, is, becauſe tho' the *Pleuriſy* requires many Bleedings, the Fever cannot allow of ſo much; and beſides, the Fever requires other Med'cines. than the *Pleuriſy* does, when an Original one. What I've ſaid, of diſtinguiſhing *Pleuriſies, Peripneumonies, &c.* from *Pleuritick* and *Peripneumonick Fevers, &c.* muſt be apply'd to *Original Rheumatiſms* and *Rheumatick Fevers*; where the profuſe Bleedings indicated in the former, are inemendable Faults in the latter. As for ſuch who are ſo unfortunate, as to labour under *Inflammatory Symptoms*, and at the ſame Time a *weak Pulſe*, a *gentle Warmth*, and other *Concurrent Signs* of a Paucity of Spirits; although they are juſtly deem'd to be about to ſink under the worſt of Circumſtances; yet ſomewhat remains to be done, and the Phyſician muſt then proportion his Diligence to the Danger. In this Caſe; the Viſcid, impacted into the Capillary Veſſels of the *Pleura*, the *Lungs*, or *Both* (as appears by a *Pleuriſy*, a *Peripneumony*, or a *Pneumo-Pleuritis*) or indeed elſewhere, requires *Tranſlation* and *Evacuation*; neither of which, in *Inflammatory* Caſes, ſhould be effected by any Means which will raiſe Commotions in the Fluids; ſo that we have but a ſmall Compaſs to move in; Bleeding then and Emollient *Fotus's* apply'd at a Diſtance from the Part affected, as alſo common *Clyſmata*, are call'd into Uſe: But under the preſent ſtate of Affairs, Bleeding is juſtly ſuſpected by many Cautious Gentlemen;

tlemen; becauſe the Patient's Spirits wo'nt bear ſuch an *Evacuation*, notwithſtanding that their Diſeaſe indicates it; and moreover, Bliſters wou'd be conducive, as wou'd alſo warmer *Alexipharmacks*, in order to revive their Spirits and rouze 'em; which, on the other hand, are Contra-indicated by the Inflammation: The Danger on either ſide is great and equal; and therefore muſt we proceed in the following manner; ſince Bleeding, in ſuch a Caſe, is abſolutely neceſſary, and we cannot ſafely do it with the Launcet, for Reaſons already nam'd; let Blood be drawn by Cupping and Scarification, to ſuch a Quantity as the Patients can bear, and let the Fomentations, made of *Fol. Malv. Alth. Sem. Lin. Rad. Lilior. alb. &c.* be apply'd to ſome diſtant Part; give Cordials adequate to the Want of Spirits and the Nature of the Fever; apply Bliſters, even ſometimes to the Seat of the Diſorder, (particularly if the Head or *Pleura* be affected;) and uſe moreover whatever is indicated by the Cauſes denoted from the Symptoms.

Symptomatical Sweats, are ſuch, where the Diſeaſed find themſelves no Better, if not Worſe. In all Sweats, the *Serum* is expreſs'd and ſqueez'd out of the Pores; but whether it be *Symptomatical*, 'tis beſt gueſs'd at, by the Effects, and the Crudity of the Urine. Some of the putrid Particles being as yet blended with the *Serum*, may paſs the Glands; and thus it often happens, that when a Decisive or Critical Sweat comes on, there is leſs to be paſs'd: And therefore if Symptomatical Sweats are not immoderate, they are not immediately to be curb'd; becauſe they are preparatory to Critical ones. The Febrile Ferment ſeems to be lodg'd in the *Serum* only; becauſe either a Sweat or the Urine will carry off a Fever; whereas *Hæmorrhages* do it only *per Accidens*; this being moſtly a dangerous, or an unfaithful *Criſis* at beſt. How too quick

quick or too ſlow a Motion may occaſion 'em, I conjecture, may be thus. We are ſure, the Openneſs of the Pores muſt give the Outlet to the Watry Particles; they muſt either be ſqueez'd out by the Weight of the *Circumambient* and Containing Fibres, which having loſt their Tone, from the Loſs or Want of Spirits, (which, we know, keep 'em Tenſe to a Connatural Degree, that their Walls may not approach to a Contact) do collapſe and flag, and cauſe the Liquids to obey their Oſcillations. Now, by how much the Weight of the Fibres is beyond the Reſiſtance of the *Serum* they contain, ſuch Diſproportion is there in the Efflux of Sweats; ſo that in this Caſe ſomewhat will be extruded; but the *Syncope's* along with the *Coldneſs* of what is expell'd, as alſo the Clammineſs of it, argue a mighty Vappidity of the Liquids, and a Decay of Spirits. This is the Caſe in ſuch Fevers as commonly merit the Denomination of *Malignant* or *Peſtilential*; in which the *Indicia* of Vigour are wanting, and the Spirits are either fix'd or evaporated. But in ſuch Fevers as approach to the *Ardent* Kind, the Reaſon is very different; for the vigorous Propulſion of the Blood, fills and diſtends the Channels, and It, like rapid Torrents, o'erflows its Banks; ſo that the thinner Parts will be thruſt off more or leſs vigorouſly, as the Channels are more or leſs full; yea, it often happens in this Caſe, that *Hæmorrhages* are a Sequel of this extraordinary Commotion and Diſtenſion. The Deſtruction of the *Equilibrium* in any Degree, is dangerous; and as theſe Sweats are *Index's* of an Exceſs or Failure of Motion in our Fluids, they require the ſame Methods as the Fever indicates, only that the Degree may be aſcertained and encreaſed by them.

Erup-

Eruptions, *Spots*, *Buboes*, *Carbuncles*, &c. Many Inſtances from the moſt approv'd Gentlemen in the Faculty, as well as our own Experience, convince us, that they proceed from either Condition of Effervescence. The *Serum* plac'd on the Fire, congeals, in a ſhort time, into a *Craſſamentum Album*; in which about one Third of its Weight is loſt, to make it do ſo. Now, Heat acts in us, as it does without us; and thus, we conclude, that the Thinner Parts evaporate and leave a Viſcidity in the Juices; and this Viſcid Blood ſtops at the Capillaries, (whoſe Diameters want Room to receive It;) and the Liquors behind, preſſing on without free Paſſage, elevate the *Cutis* into Puſtules. Now this Intumeſcence may either depend upon the Juices which become Viſcid, from Evaporation, or other heterogeneous Mixtures that coagulate the Blood; and conſequently, either an *Ardent*, or a *Hectical* Sort of Fever, may produce 'em. But if they once become conſiderable when form'd, they require particular Remedies: Thus *Bubo's* require Maturatives; nay, *Cauſticks*, or the *Lancet*, rather than they ſhould retreat; and then *Digeſtives*, as do common Ulcers: Only the Phyſician muſt be wary, not to Bleed when a *Bubo* appears, (unleſs the Motion overbears extravagantly;) nor muſt the Blood move ſo impetuouſly as to raiſe Sweats; but gentle *Alexipharmacks* muſt be given to ſupport the Spirits. *Carbuncles* are known by Blackiſh and Purple-colour'd Puſtules, inflam'd at the Bottom; they are generally Mortal: The Actual Cautery applied around 'em; and then Digeſtives, as in Ulcers, Cure 'em, (if poſſible.) *Parotids* are to be treated as *Bubo's*. I need not repeat here, what I have ſaid of *Imperfect Criſes*, and therefore I ſhall here ſuperſede any farther Notice of them.

Hæmor-

Hæmorrhages may be occaſion'd by the Breach of the Veſſels, either from the Diſtenſion caus'd from the *Ardent* or *Hectical* Sorts of Fever. I here ſay nothing of *Critical* ones, which muſt be ſuffer'd to run as long as Symptoms abate, without Diminution of Strength. The Heat of the Room, contributes much to them: For the compreſſive and reſtitutive Force of the Air being in a reciprocal Proportion; as much Weight as it loſes by the Heat of the Room, ſo much will the Globules expand and enlarge their Dimenſions, and over-run their Limits. We muſt make Uſe of all the *Aſtringent* Remedies to cloſe the Veſſels, ſuch are *Styptic. Regis, Sacch. Saturn. Sang. Dracon. Acet. Stillatit. Coral. rubr. Croc. Mart. aſtring. Conſ. Roſar. rubr. Syr. Myrtin.* along with *Aq. Plantag. Germ. Querc.* and ſuch Things to mix with them. But externally, I find nothing better for *Hæmorrhages* at the Noſe, than to blow up a little *Colcothar*: It pains them a little for a while, but does effectually check 'em; (firſt having made them blow out the Cakes.) *Roſe-Buds, Equiſetum, Plantag.* and ſuch Things in *Decoctions*, do well for *Fotus* to other Parts.

If any Fluxes happen in the Small-pox, Meaſles, or Peſtis, *after the Eruptions*; ſuch are, a *Mictus Sanguineus, Lochia, Menſes, Dyſenteria, Hæmoptoe, Diarrhœa, Cholera*, and *Lochia*; whether one, or more together, as the *Lochia* and *Dyſenteria*, &c. we are obliged to curb the *Flux*, and mingle ſuch Medicines as may comfort and ſupport the *Spirits*; but theſe are deſperate Caſes.

If any Inflammation (*ſuch is an* Angina, *a Pleuriſy*, &c.) *comes upon a Puerperal Fever, when the* Lochia *are preſent*; 'tis alſo a dangerous Caſe: However, the Inflammation being the more dangerous Symptom, muſt be cured by Bleeding,

(not exceeding,) and yet not neglecting the Fever; but, as *Vidius* has it, *Quis autem eſt iſte cui Exploratum id ſemper eſſe poſſit : Quiſve eum Delectum teneat, ut, ubi Cogitur, minus Malum ſuſcipiat Cauſâ majoris Evitandi?*

Opthalmia, is a frequent Diſorder after the Small-pox. The Reaſon of *Inflammations* being given in above, I ſhall not here repeat it; but ſhall note, that beſides *Bleeding*, and *Cathartick*s mix'd with *Mercurials*, the common *Topics* in *Collyrium's* do often fail; as, I remember, happen'd to a Child, who had made Uſe of all the common Remedies, and yet remain'd entirely Blind on both Eyes; The Eye-lids were *Scirrous*. But after a *Suffitus* with *Cinnabar*, a *Cataplaſm* with *Emollients* and *Diſcutients*, cover'd with *Cinnabar*, with ſome of *it* mix'd in a *Collyrium*, we recover'd her, after ſhe had been Blind for above a Quarter of a Year, and was thought paſt Recovery.

Dropſies frequently follow Fevers, from the Exhauſtion of Spirits, and the Small Liquors drank in the Time of the Fever. But a Doſe or two of *M. P. Rud.* with *Merc. Dulc.* will evacuate the Watery Particles from the Blood; and the Infuſions of *Bitters* with *fixt* and *volatile Salts*, will prevent its Regeneration, by invigorating the Maſs. As to Local Faults, (ſuch are *Phymoſes*,) *Diſcutients*, after Evacuations, are neceſſary.

Diabetes. I have known this unlucky Symptom happen after the Meaſles; whether from any *fuſing Principle* in the Blood, or any *Laxity* in the Kidney-Glands, or both, I ſhall not determine; only I ſhall remark, as *Sydenham* does, that a *Diarrhœa* and *Diabetes* are cured by the ſame Methods, (*viz.* by *Rhabarbarates*, *Agglutinants*, *Mucilaginous Drugs*, *Stypticks*, and *Opiates*.) I have found the *German Spaw-Water* to cure It,

(by

(by correcting the Acrimonious Humors, and conſtringing the Glands,) after proper Evacuations. This is call'd *Febris Uretica*, when it happens with a Fever.

CHAP. VII.

The Recapitulation.

HAving thus run over ſome of the principal Caſes that attend or follow Fevers; I ſhall take Leave of the Subject, firſt recapitulating what I have advanc'd.

I have endeavour'd to make it plain, that Fevers are generally the *mediate* Product of ſome deprav'd State of Blood, put in a Hurry from ſome *external* Accident of the Air: That the Pores are very alterable in their Diameters, and can be changed into any Compaſs, in Proportion to this Impulſe of the Air; and therefore they can either paſs a large Quantity of the *Perſpirabile*, or can retain more of *it* than they ſhould. In the latter Caſe, Fevers are common Attendants, as *Sanctorius*, *Aph.* 11. *ſect.* 1. makes it plain, ſaying, *Si ex Staticis deprehenditur impeditam eſſe Perſpirationem, Diebus ſequentibus vel ſuccedet plenior Perſpiratio vel aliqua Evacuatio ſenſibilis vel Cachexiæ Veſtigium vel* FEBRIS. The Blood, thus diſturb'd, *produces the Fever, and all the Symptoms along with it, which are* Index's *of the particular State of Blood then reigning.* But I could never obſerve two Perſons in Fevers held in the ſame Manner, altho' *Epidemical Fevers* were then on Foot: For altho' the Air may be ſo unwholſome as to affect many at the ſame Seaſon, eſpecially unwary or tender Perſons; yet all theſe

never are ſeized but with much Difference from each other; one having a very high and ſtrong Pulſe; another a very low one; one with *Inflammations*, another with *Pains*, a third with *Vomitings*, and a fourth and fifth with ſome different Symptoms: So that the Fevers ſome Learned Perſons have obtruded upon us, as the ſame, *in Every Individual*, in ſuch and ſuch Years, can ſignifie no more than as a Direction to us, how ſuch Fevers (if any ſuch happen) ſhould be manag'd. Indeed, if Perſons under ſuch a Habit only are ſeized, and with equal Strengths, we may expect the ſame Methods will ſerve: But having had Hundreds under my Care, I never yet found this hold true. *However, I know no Fever, from a* Diary *to a* Peſtis, *which do's not only admit of, but even require proper Evacuations to unload the Veſſels, or* Primæ viæ, *of Part of the offending Matter; more-eſpecially if there be a Tendency to a* Criſis.

The Species of Evacuations *is determinable from the State of Blood denoted by the Symptoms; but the* Quantity, *from the Strengths of the Patient.* For it ſeldom happens that a real *Abſumption* of Spirits is the Cauſe of the weak Pulſe *in the Beginning of a Fever*, but rather a Fixation of them; and conſequently Evacuations are always required. *Hence then, ſince the Blood or Humours offend in Quantity moſtly, Evacuations are now proper; and eſpecially, we muſt begin very early with them, in Malignant Caſes, or* Poſt eſt Occaſio calva.

1. *Where-ever the Heat is great, and the Pulſe ſtrong; or where the Heat is not conſiderable, ſo the Pulſe appear oppreſſed, and the Strengths of the Patient have not been weaken'd by any preceding Accidents*; Glyſters, Bleeding, Cupping, Leeches, *Diluents*, *Papaverines*, and ſometimes *Acids*, are neceſſary. If Inflammatory Diſorders, or violent Pains afflict

afflict your Patients (whether the Pulſe be ſtrong, or even if weak, ſo it be only eclips'd) Bleeding is neceſſary to clog the rapid Motion of the Blood; which, by puſhing on ſo violently, daſhes againſt the Veſſels, and ſtops itſelf. Bleeding alſo is neceſſary in *Plethorick Perſons*, to take off the burdenſome Load. In *Hæmorrhages*, if the Blood-Veſſels are overcharg'd, Bleeding often relieves ſuddenly: But I have ſeen the diſmal Effects of it in Petechial Fevers, with a weak Pulſe; where the Lancet is often too ready for the pidling Reward. *Phrenzies* require Bleeding, and can hardly be cur'd without it, becauſe they are Inflammations; but as they generally happen at the Ἀκμὴ of the Fever, Caution muſt be uſed: *Comatous* ones do'nt require ſo much to be drawn off, as the *Furious Species*. But how it comes to paſs that Bliſters are ſo indiſcreetly made uſe of in *Furious Phrenzies*, has always been to me ſomewhat ſurprizing. In ſuch Caſes then you muſt avoid all *Theriacal* Medicines. In the *Apparatus* of the *Small-Pox*, ſuch Medicines muſt be avoided as will raiſe any Commotion; and even the ſame Caution holds good in any *Stadium* of the *Small-Pox*, ſuppoſing the Heat and Pulſe to contra-indicate. In Youth, eſpecially in Wine-Drinkers, when Fevers ſeize, Bleeding, and the ſame *Regimen* are generally requiſite. *Coma's* and the Symptomatical *Petechiæ* often oblige us to take the ſame Meaſures. The *Second Fever* of the *Small-Pox* (which generally proceeds from an *inſufficient Extermination* of the morbid Matter) is often ſo violent as to require Bleeding. Great Difficulties of Breathing (whether they are convulſive *Aſthma's*, ſuffocating *Catarrhs*, *Peripneumonies*, or Diſeaſes congenial to theſe,) in ſuch a State, neceſſarily require Bleeding, with a plentiful Hand: Nay, in *Ardent* Fevers, tho' the

Pulſe ſhou'd appear ſmall, (if oppreſs'd,) it is to be ventur'd on.

2. *Where the Heat is inconſiderable, and the Pulſe weak, tho' quick :* After Evacuations, ſuitable to the reigning Symptoms, are made uſe of; the gentler *Alexipharmacks* are proper; ſuch as the *Teſtaceous* Pouders (*Crabs-Eyes*, *Pearl*, *Coral*, *Oyſter-ſhell*, *Crabs-Claws*, &c.) They are proper, where ſome critical Eruption has been impeded; in the Fevers of Old Men; in Miſtakes from Evacuations, to wit, where too much is drawn off; where there is any Faintneſs or Sickneſs at the Stomach, or any Pain at the Pit of it; or where the Matter (that, by the Efforts of a *Criſis*, has appear'd externally) retreats into the Maſs again; in a Difficulty of Breathing, from ſuch a State, (that is, with a weak Pulſe, and Coolneſs in the Habit;) in an *Epilepſy*, in Eruptives; and in a Salivation ſuppreſs'd. If any of the *Viſcera* are already ſeiz'd (or are in Danger of it;) as the *Head*, with *Deliria*, *Coma's*, &c. or the *Lungs*, with *Coughs*, *Aſthma's*, &c. then, in this State, Bliſters are to be apply'd. (*Vid.* p. 91, 94, 95, 107, 108, 119, 128, 129, 150, 151, 154, 156, 159, 160, 162, 173, 174, 182.) Nay, *Bliſters are often requir'd in the Beginning*, where the Pulſe is weak, or the Head is loaden with a Quantity of Serous Blood, which brings on *Coma's*, &c. with a Slow *Fever*; or for the Prevention of *Comatous Deliria*, in Epidemical Slow Fevers, which terminate thus; but very very often at the *State*, for the Prevention of *Coma's* and *Comatous Deliria*.

3. *Where the Heat is hardly, if at all, perceptible, the Pulſe is very ſmall, and where the Extremities are cold*; in ſuch a State, (after ſuitable Evacuations,

cuations, if they are requir'd,) we muſt have recourſe to the warmer *Alexipharmacks*, ſuch as *Rad. Serpentar. virg. Volatile Spirits* (of *Hartſhorn*, *Salt Armoniack*,) and the *ſpiritous Cordials*; as alſo to *Bliſters* and invigorating *Suppedanea*. And towards the 'Ακμὴ, Wine may be allowed. In Peſtilential Caſes, where the Puſtules of the *Small-Pox*, *Buboes*, or *Spots* retreat into the Maſs again, theſe are neceſſary. In Difficulties of Breathing, in ſuch a State, (*viz.* where there's a *weak Pulſe*, and an *imperceptible Heat*,) they are indicated; as alſo in Epilepſies, a ſuppreſs'd Salivation, and all Symptoms in ſuch a Condition.

4. *Where there are any Remiſſions or Intermiſſions*, the *Bark of Peru* is the moſt remarkable Remedy; but in any *Eruptive Fevers*, 'tis uſeleſs or dangerous before a total Eruption. As to other Febrifuges, 'tis remark'd that they are to be given before the Fits; *and if they be of a volatile Nature*, then they muſt be given only an Hour before the Fit; *if of a fix'd Species*, you muſt give 'em two or three Hours before it; becauſe they produce their Effects ſlowly.

5. *At the State of the Fever*, (that is, after the *Augment* is over, and the *Fervor* abated;) what is critical muſt be promoted, ſo long as it continues to be ſo; for, *Quicquid in Principio bonum extiterit Perſeverantiâ fit viſitioſum*, ſays *Cheſneau*; and *Sydenham*, in other Words, copies him, in ſaying, *Sudores utiles, dùm Urina cocta eſt, diutiùs quàm cocta eſt, non ſunt promovendi.* (However, you muſt underſtand the Words *diutiùs quàm cocta eſt*, in ſuch a Senſe as I have explain'd above in the *Criſes*.) A Salivation in any Fever. is always unexceptionably critical (without waiting for a concocted Urine, tho' it precedes,) unleſs it be

too long continued; it is promoted by Liquors given plentifully, and warm'd. Here then the warmer Alexipharmacks are indicated, and a gentle Promotion of what is critical by proper Specificks. So that Sudorificks are uſually ventur'd on at the State of the Fever, when Nature inclines that way, and the Urine is well concocted: But in the Beginning of ordinary Fevers, eſpecially the Inflammatory ones, they inflame more, and occaſion *Pleuriſies*, *Head-achs*, *Coma's*, *Spots*, *Bloody Urine*, and whatever Symptoms depend on a Commotion of the Maſs. 'Tis true, in a neigbouring Nation, in ordinary Fevers, they make freer with them, than we dare do; and the Pupils of ſuch, in their Practices here, often (at their Beginning of Practice) commit great Miſtakes; not conſidering that they agree with their *ſerous*, but not with our *fizy* Blood: Yet, in ſome Malignant or Peſtilential Caſes, I have ſeen them anſwer from the very Commencement of a Fever; but then the Urine, at the firſt Seizure, was concocted, and they naturally dropt into 'em; and the Suppreſſion of 'em brought on Symptoms of a fatal Conſequence to ſome, which were plain *Indications* for them: Alſo in the *Peſtis* itſelf, no other Method, without Scandal, is allowed to be followed; tho' Authors differ in the Manner and Continuance of them: But our Countryman *Sydenham*, in copying ſome Antients, acts moſt prudently in this Affair, in continuing them for Four and twenty Hours, without Interruption, or Change of the Sheets or Linnen; for, *Tolli, quod Putridum, non alterari, poſtulat*, is meant of ſuch a State of *Fever*, where the Contents are ſo deprav'd, as to be preternatural in their whole *Subſtance*, as the Antients term'd it.

Hippocrates's Remark is, That ὀργᾶνλες *eodem die exturbandi*, *Aphor.* 22, & 24. *Sect.* 1. and *Aphor.* 10. *Sect.* 4. (ὦ ὀργᾶ, αὐθημερὸν φαρμακᾶειν.) We muſt

muſt then enquire what this Turgeſcence implies; and we ſhall be enabled to judge when to evacuate. In general, Humours are ſaid ὀργᾶν (*turgere*) when they *range in the Maſs*; and tho' they fix nowhere, yet they *create an Uneaſineſs*, and ſeem to invite us to expell them. If we add, they *turgeſce*, when they are in great *Plenty*; when they are *concocted*; and when they are *Peſtilential*; *we may, in all theſe Caſes, conclude, that Evacuation is ſomewhere requir'd. Evacuations then muſt be made, when indicated*; the Neglect of which, in due Seaſon, is juſtly reputed to be the Fault of ſuch who are firſt call'd.

6. *After the State*, that is, when there is a plain Abatement of the Symptoms, and the Urine ſeparates; you may uſe proper *Evacuations*, whether *Purgatives* or *Bleeding*. Care muſt be taken, that what is critically expell'd, be not driven back again into the Maſs: For now it is that *critical Eruptions* or *Evacuations* are to be encourag'd. The Times in which *Criſes* are perform'd, are very different in the ſeveral Species of Fevers; in which the Eruptive Sort is, by much, the moſt active.

7. *If a* Nauſea, *or a Vomiting, or Loads at the Stomach be complained of*; an *Emetick* is to be given; or if they are ſuch Perſons as cannot bear a Vomit, then a gentle *Lenient* ſupplies, which you may repeat at a little Diſtance, if requir'd by the Continuance of the Load: For thus the neſtling Humours, lodg'd in theſe Paſſages (which make way for *Diarrhœa's*) are thrown off. *Harris, in Morb. Infant. p.* 52. obſerves, That Sir *W----m Boiſe*, of *Canterbury*, took off *Coma's* in *Worm-Fevers*, by *Mercurials*. I ſhall not ſay how much this depended upon the *Saburra*, as the *Fomes* of

of this Fever, and conſequently required Evacuations proper to exterminate it, which kill the Worms. And beſides, whoever takes away the Cauſe of any Diſorder, which is not fixt, neceſſarily takes away the Symptom. *Glyſters* evacuate the *Fæces*, if too plentiful, as well as the *Saburra* of the *Colon*; and may (if Purgative) ſupply the Neglect of Lenients in weaker Conſtitutions.

Purgatives (by which I would, in Fevers, be underſtood to ſpeak of *Lenients*) are neceſſary, where there is a Turgency in the Humours. In a *Saburra* of the Inteſtines; before a Fever; in an *Aſtrictio alvi*; in a Comatous Phrenzy; after Signs of Concoction; and, according to F. *Piens*, *in Coctione qualicunq*; even in the Beginning and Augment; in the weakeſt Perſons, after Concoction, in Malignant Caſes; and after the 7th or 9th Day in Childbed-Women.

8. *In the Peſtis*, *Diaphoreticks* are only to be confided in; as alſo in Peſtilential Caſes; and even in Malignant Fevers, they are the only Relief: For in the *Peſtis*, Nature is oppreſs'd and ſinking: They are indeed to be ſpecificated, ſo as that in the *Ardent Species*, fix'd *Antimonials*, and even *Salſo-Acids* are conducive; but in the *Hectical Sort*, the more *volatile* ones are to be uſed.

9. *Hence*, *in all Fevers whatever*, *the Heat and Pulſe muſt neither exceed the natural*, *nor languiſh below that Standard*; *whether before the* Criſis, *in the Time of it*, *or after it is over.* So that the Degrees of the Strengths of the Pulſe, and the Warmth, indicate the various Alteratives; which, *in great Heats and ſtrong Pulſes*, require the Coollers; (in which ſome Caution is neceſſary, ſo as *Acids* are dangerous in Inflammatory Caſes, becauſe they

they coagulate:) *But in the contrary State*, the warmer Medicines.

10. *Opiates are naturally required* in all violent *Evacuations*; in any notable *Commotion* of the *Spirits*; in any *violent Pains*; in *Epilepſies*; in *Phrenzies*; where the Spirits, before any *critical Eruption*, are too rampant; in *Anxietudes* in *ardent* Malignant Caſes: But if it be poſſible, 'tis adviſeable to forbear 'em before a *Criſis*.

11. *Revulſions are made uſe of*, to prevent ſome noble *Viſcus* being ſeiz'd: When the Brain is in Danger, (as will appear by the Signs of its Plenitude;) or the Lungs are threatned, (our Breath being ſome way affected;) and ſo of the reſt. As to Revulſions, it is not the the Buſineſs of this Paragraph to mention their Methods, nor the various *Rectitudes* obſervable in 'em.

12. *In every Fever, the Quantity offending is to be evacuated: And alſo, the Evacuation is diverſify'd by the Nature of the Humour offending.* Hence the Particles offending in the *Puerperal Fever* are to be evacuated by Sweats, and the *Lochia*; as are thoſe in the *Lacteal Fever*; as theſe in the *Pleuritick Fever* in Puerperals; the *Febris alba*, by the *Semen* or *Menſes*; ſo that if the *Head is moſt affected*, then *Hæmorrhages* terminate ſuch Fevers; if the *Uterus*, the *Menſes* evacuate 'em ſafelieſt; *if the Blood*, *Sweats* carry thoſe beſt off.

13. In *Agoniſtical Criſes*, we muſt neither promote nor curb Evacuations, but ſuffer 'em to go forward, according to Nature's Bent; which, whenever they become very troubleſome, are no farther, then, term'd *Criſes*, but *Symptoms*, and are to be remedied by proper Methods.

14. Every

14. Every Symptom is to be relieved by its proper *Indicata*, over-and-above what is remark'd in the above-nam'd Paragraphs of this Corollary: And as Fevers are ſo collective a Diſorder, that to offer at ſumming up all the Symptoms producible by it, and their Remedies, would be to compile a whole Syſtem of the Medical Art: Therefore I ſhall only sketch out proper Remedies for ſome Symptoms commonly occurring in each *Species*, to illuſtrate the Method; and ſhall leave the Reader to conſult, 'till a more proper Seaſon.

CHAP. VIII.

A Syllabus of the

PRESCRIPTIONS.

TO render this little Treatiſe as Uſeful as I can, I have here ſubjoin'd ſuch Remedies as I have found proper in Fevers: And ſo many Variations of 'em, as that, at one View, moſt of what is uſeful, may be ready for Preſcription; which I have done, in order to illuſtrate what I have advanc'd. I have ſuppos'd the Patient at the Age of Five and Twenty, and I leave the *Recipe's* to be adapted to each Age, as the Preſcriber ſhall judge proper.

In Ardent Fevers.

Injiciatur Enema ex Lacte ſaccharato; tum extrahatur Sanguis quamprimum ad ℥x. *e Brachio; repetatur, ſi requiratur.* ℞ *Aq. Borag. Bugloſs.* *a* ℥iv.

a ʒiv. *Meliſſ.* ʒij *Lact. Alexit.* ʒj. *Cinnam. h.* ʒiij. *Sp. Nitri d. q. ſ. ad Acorem gratum, Syr. Violar.* ʒj. *m. f. Julapium cardiacum rubrum, cujus capiant Cochl.* vj. *in Languoribus.* Vel,

℞ *Aq. Portulac.* ʒvj. *Paralyſ.* ʒij. *Syr. Diamoron* ʒß. *Sal. Prunell.* ℈j. *m. f. Julapium, ſumendum pro Lubitu.*

℞ *Aq. frigid. Saxon.* ʒx. *Papav. Rhœad.* ʒiij. *Syr. Limon.* ʒß. *m f. Julap. e quo capiant Cochl. aliquot in Languoribus.*

℞ *Conſ. Borag. Bugloſs* ā ʒj. *Violar.* ʒiß. *Tartar. vitriolat.* ℈ij. *Syr. Limon. qs. m. f. Electuarium cujus ſumant Magnitudinem Caſtaneæ ter de die ſuperbibendo Cochl. aliquot Julapij cujuſvis.* Vel,

℞ *Conſerv. Lujul.* ʒiij. *Cynosbat.* ʒß. *Limon. tabulat.* ʒj. *Syr. e Rub. Idæo qs. m. f. Electuarium, ſumant ut prius.* Vel,

℞ *Conditur. Berber.* ʒij. *Miv. Cydon, Uvar. Corinthiac,* ā ʒj. *Syr. Diamor. qs. m. f. Electuarium, Capiant. ut prius.*

℞ *Tinctur. Roſar.* ℔ij. *bibant ex eâ ad libitum.*

℞ *Decoct. Coccin.* ℔ij. *ſit pro Potu communi.*

℞ *Amygd. d. excortic. no.* x. 4. *Sem. frigid. maj.* ā ʒj. *Contus. In mortario, eis ſenſim affund. Aq. Hord.* ℔ij, *Colatur. add. Sal. prunell.* ʒß. *Sacch. perlat. qs. m. f. Emulſio pro Lubitu bibenda.*

Bibant Cereviſiam tenuem; Serum Canarinum tenuiſſimum; Claretum Coberi; vel Serum e Pomis; Tea ex Limon.; Hydrogala.

Diæta

Diæta ſit Juſculum avenaceum, Gelatinæ, Panatella, Flos Lactis Orizatus, Limonatus vel Imperialis; Poma toſta; &c.

Under this Head Symptoms are to be treated differently. So,

Lassitude.

Under this Head, it is called *Laſſitudo Plegmonodes.*

Extrahatur Sanguis ad ℥xij. *e Brachio, & reiteretur pro Re natâ; In aliis, procedatur ut ſupra.*

A Vertigo.

Extrahatur Sanguis e Brachio ad ℥xij.; *repetatur, ſi opus ſit. Quoad Cætera, procedatur ut ſuprà, quia Symptoma eſt, tantummodò, lato Senſu.*

Head-ach.

℞ *Ol. Roſar. Acet. ejuſd. à qs. Sacch. Saturn.* ℥j. *m. f. Epithema Fronti admovendum.*

℞ *Sem. Papav. alb.* ℥ß. *Flor. Roſar. (a Deſtillatione reſid.) mj. Acet. Sambuc. (cum Vitello unius Ovi agitat.) qs. m. ſuper Ignem in Epithema, Fronti admovendum & ſæpius renovandum.*

Priùs præmiſſis venæ Sectione, Cholagogo miti, vel Enemate pro Exigentiâ, &c. *ut in Genere.*

Deliria (Phrenzies.)

Extrahatur Sanguie e Brachio & Pedibus pro Virium Ratione (priùs Enema ex Lacte Saccharato injiciatur;) dein Columb. per medium ſect. Soleis admoveantur; vel ℞ *Emp de Mucilagin. qs. Opij, Ol. Lilior. malaxat.* ℈ß. *m. f. Emplaſtr. ſolearia.*

Bibant

Bibant Copiosè ex Sal. Prunell. in Aq. Hordei vel Ptiſanâ; tandem ℞ *Aq. Papav. Rhæd.* ʒij. *Lactuc. Paralyſ.* ā ʒiv. *Sal. Nitri purif.* ℈j. *Laud. opiet. gr.* iij. *Syr. Papav. Rhæad.* ʒß. *m. Capiant. cochleatim.*

Foveantur Hypochondrio Decocto Althææ in Lactæ; Loco Columbor. diſſectar. Soleis admoveatur Theriac. Androm.

Convulsions.

In order to lay the Hurry of the Spirits, and recruit them, as being harraſs'd.

Vena *Secetur, ad* ʒx. *extrahatur Sanguis*, Cucurbitulæ *variis Partibus admoveantur.*

Enemata *ex Decoct. Emollient. injiciantur cum Oleo Succini;*

℞ *Aq. Rut. Puleg.* ā ʒij. *Lactis alex.* ʒiv. *Pæon. C.* ʒj. *Bez. min gr.* xv. *Laud. liq.* ʒß. *Syr. de Mecon.* ʒß. *Sal. vol. oleoſ. gut.* vj. *m. f. Julapium Cochleatim ſumendum.*

Coma's, Lethargies.

Extrahatur (& repetatur in aliis Venis) Sanguinis Quantitas, ad ʒx., *e Jugulari; Cucurbitulæ Scapulis applicentur.*

℞ *Aq. Rut.* ʒiv. *Sp. Vitriol. Gut.* x. *m. f. Hauſtus, ſæpius repetatur.* Etmuller. p. 427.

Acetum Naribus admoveatur, in Comate febrili. Etmullerus, p. 428.

Abſtineant a Lecto per Horas aliquot Diei.

Watchings.

Extractione Sanguinis præmiſſâ ad ʒx. *vel* xx; *Enematibus dietim injectis (ex Decocto communi;)*

Pedes

Pedes Decocto (e Fol. Hyoſcyam. Sem. Papav. alb. in Lacte vaccino) laventur.

Emulſiones copiosè bibant cum Semine Papav. alb. factas.

Epithema Fronti admoveatur ex Vitell. Ovor. no. ij. *Ol. Roſar.* ʒß. *acet. Roſar.* ʒij. *Placent. Roſac. qs. f. Frontale.*

Vomiting.

Premiſſâ Sectione Venæ ad ʒx. *Eluatur Ventriculus Aquâ Pulli vel Hordei; Saburrâ eliminatâ,* ℞ *Succ. Limon.* ʒß. *Sal. Abſinth.* ℈j. *m. Capiat ſæpiùs; vel* ℞ *Aq. Menth.* ʒij. *Succ. Cydon.* ʒj. *Sp. Vitriol. Gut.* vj. *Syr. de Mecon.* ʒß. *m. Capiant cochleatim. Bibant ſæpius Tea e Succo Limonum fact.*

Ischury.

Eſt Febris Καυσώδης *quoddam Symptoma inquit* Ballonius Annot. 1. in C. 37. L. 2. *& Diuretica non probat; quoad Emetica quæ laudat, non probo; at V. Sang. ſuſtuli.--Derivandum--potius per alvum.*

Diarrhœa, Dysentery.

Tundatur vena ad ʒx. *& ſi opus ſit, iterum celebretur. Bibant Tinctur. Roſar. vel Decoct. album. Rheo ad* ʒj. *in Aq. Cichor.* ʒiv. *infuſ. & Syr. e Roſ. ſolutiv. Edulcorat. Saburra elutrietur; & pro Re natâ Potio reiteretur.*

℞ *Pulv. G. Arab.* ʒjß. *Oc. Cancror.* ʒß. *Laud. Lond. gr.* iv. *Syr. de Mecon. qs. m. f. Bol. no.* ij. *Capt.* j. *Horâ quâque 6tâ.* Seu,

℞ *Rad. (ſeu Lign.) Cayennenſ.* ʒj. *f. p. Divid. in Chart. no.* ij. *pro Vicibus* ij. *Cap. in Aq. Cinnam. h.* ʒij. *ad Diſtantiam 6 Horarum. Non fallit.*

Colicks,

Colicks, Iliack Passion.

Præmiſſâ Sectione Venæ; Injiciatur Enema (ex Flor. Sambuc. Chamomill. Melilot.) cum Lacte paratum. dein ℞ *Fol. Senn. Alex.* ʒjß. *Sal. Tartar. gr.* vj. *Infundantur in Aq. font. Colatur.* ʒiv. *add. Mann. Calabrin.* ʒß. *Syr. e Roſ. Solutiv.* ʒj. *Crem. Tartar.* ʒij. *m. f. Potio tepidè hauriendâ; operatione peractâ,* ℞ *Aq. Menth. Flor. Chamom. ā* ʒij. *Syr. de Mecon.* ʒvj. *Sal. prunell.* ϑj. *m. f. Hauſtus, ad dolorem pacandum.*

Nausea, Anorexia.

Præmiſſis Venæ Sectione, & Emetico leni, ex Pulv. Rad. Hypocacuan. ʒß. *in Aq. Cardui, dein* ℞ *Conſ. Roſar. vitriolat. q. ſ. Capt. parum ſubinde in Nauſeâ.*

℞ *Sp. Vitriol. d.* ʒij. *Capt. Gut.* vj. *in Liquore aliquo.*

℞ *Sp. Sal. Armon. acid.* ʒj. *Capt. gut.* x. *In Aq. Hord.*

Thirst.

Sedatur Vino Lymphato affatim ſumpto; Clareto Coberi, &c. *ut prius.*

Dyspnœa.

M. Sang.; Sp. Sulphur. gut. x. *In quocunque Vehiculo aqueo.*

Pains (Rheumatick.)

M. Sang. (*repetitâ, modo Pulſus fortis, Ardor & Dolores urgeant.*) *ad* ℥xij. vel *Cucurbitulis*; *Enematibus Emollientibus* (*ex Decocto Communi, ex Lacte Saccharato,* &c.) *Emulſionibus uti prius, Epithematibus* (*ſi requirantur*) *ex Pane cum Lacte cocto & Croco, ſeu ex Lenticulâ paluſtri Flor. Chamom. Lacte & Farinâ Hordei ſimul coctis & admotis, ſeu Aq. Plantag. Roſar, Aceto Roſar. &c. Diluantur Salia Aqueis,* (*Hordeaceis, avenaceis, &c.*) *Tandem, a Statu, dentur Diaphoretica ut Turgentes Humores expellantur. Abſtineant a Lecto per aliquot Diei Horas, uti* Sydenham (a Nic. Piſone L. 3. C. 3. de Anginâ) *conſulit.*

Worm-Fevers.

Præmiſſis Venæ Sectione & Enemate. ℞ *Corallin. pulv.* ʒß. *Conſ. Lujul.* ʒj. *Sp. Vitriol. gut.* iv. *m. f. Bolus, Capiant; tum Horâ unâ vel alterâ elapſâ; Detur Infuſum Sennæ* ʒiij. *cum Syr. e Flor. Perſicor.* ʒjſß. *M. Admoveatur Emp. vermifug. Batean. Regioni Ventriculi.*

Puerperal Fevers.

V. Secetur in Brachio, tum in Talo; tum ℞ *Aq. Ulmar. Puleg. ā* ʒiv. *Aq. Hirund. cum Caſtor.* ʒij. *Gelatin. C. C. acid.* ʒß. *Acet. Theriacal* ʒiij. *m. f. Diaphoreticum.* Etmullerus.

Inflammations, (Pleuriſies, Peripneumonies, &c.)

Venæ Sectione repetiâ ſanantur; tum Emulſionibus ſuprà memoratis; Sale Prunellæ ad ϑß. *in ſingulis*

lis Hauſtibus; Cavè tamen ab Acidis, ne Coagulum inde augeatur, & ſanguinis Circuitui in Arteriis evaneſcentibus Obex ponatur; Diæta ſit tenuiſſima. Hinc in Colo Inflammato, *Extrahatur Sanguis ad* ℥xij. *e. Brachio; & reiteretur, ſi ab Inflammatione indicetur; Item Hirudines Ano admoveantur; Item injiciatur Enema (ex Brodio Vervec.* ℔j. *Vitell. Ov. no.* ij. *Sacch. Cryſtal.* ℥j. *m.) Potus ſit Decoct. Hord. cum Syr. Dialth.* ℞ *Flor. Chamom. Sambuc. Melilot.* ā *p* iij. *Farin. Lupin.* ℥ij. *Caricar. ping. no.* vj. *Inciſ. & Contus. Coq. In Lacte ad Conſiſtentiam Cataplaſmatis, admoveatur.*

Unde in omni Inflammatione, priuſquam Radices egerit, ſeca Venam ſæpius, refrigera Sanguinem, Revelle; diſcuti & emolli. Etiam in Puerperis, Venæ Sectio celebretur, parcâ tamen Manu.

Symptomatical Sweats.

V. S. præmiſſâ pro ſudorum Modulo; ℞ *Aq. Portulac.* ℥iv. *Lactuc.* ℥iij. *Sal. Prunell.* ℈j. *Syr. Limon.* ℥ß. *Tinct. antiphthiſic. Garmann. gut.* xij. *M.; Ad alium Lecti Locum ſe moveant; A Lecto eximantur; Stragula amoveantur aliqua; Feneſtræ aperiantur; Sudor non abſtergendus eſt.*

Hæmorrhages.

V. S. præmiſſâ, & repetitâ pro Exigentiâ; Bibant Tincturam Roſarum. ℞ *Alumin. crud.* ℥j. *G. Lacc. Pictorum* ʒiß. *m. f. Pulvis inſufflandus; ſeu Stypticum Tasburgenſe intrudatur.*

Fluxes (of any Sort.)

Sectio Venæ, vel Cucurbitulæ premittantur. Ratione Febris Speciei, *Refrigerantia ſæpius memorata exhibeantur.*

exhibeantur. Et demum Ratione Meatûs aperti, *Cohibentia propria administrentur; & pro Medici Lubitu commiſceantur.*

IN THE

HECTICAL SPECIES.

Præmiſſâ Catharſi, *ex Fol. Senn. cum Syrup Roſaceo ſolutivo & Cremore Tartari; Vel Emetico; Vel alio quovis Evacuatorio Indicato.*

℞ *Bezoar. min.* ℈j. *detur. ſæpius in Juſculo.*

℞ *Bezoard. min.* ℈ij. *Camphor. gr.* xij. *cum. Aq. Card. bened.*

℞ *Bezoard. min.* ℈j. *Sal. Prunell.* ʒß. *Camphor. gr.* vj. *m.*

℞ *Marg. ppt.* ʒj. *Oc. Cancror.* ʒß. *Sacch. Cryſtall. ad Pondus utriuſq; m. f. Pulv. divid. in Chartul. no.* iv. *Capiant.* j. *Horâ quâq;* 3tiâ, 4tâ, 5tâ. *In Julapij cujuſvis Cochl.* vj.

℞ *Pulv. e Chel. C.* ʒj. *Sacch. alb.* ʒß. *m. f. Pulvis dividendus in Chart. no* ij.

℞ *Pulv. e Chel. C.* ʒj. *Theriac. Androm.* ʒij. *Conf. Alcherm. incomplet.* ℈j. *Syr. e Cort. Aurant. q. ſ. m. f. Bol. no.* ij.

℞ *Camphor. gr.* iv. *Pulv. e Conf. de Hyacynth.* ℈j. *Diaſcord. Fracaſtor. S. Melle* ʒß. *Syr. Caryoph. q. ſ. m. f. Bol.* ℞ *Pulv. Rad. Serp. Virg.* ℈j. *Ther. And.* ʒj. *m. f. Bol.*

℞ *Sal.*

℞ *Sal. Vol. C. C. gr.* vj. *Conſ. flor. Anth.* ʒß. *Conf. Alcherm. ſ. m.* ℈j. *Syr. Croc. q. ſ. m. f. Bol.*

℞ *Pul. Goan. Lap. Contrayerv.* ā ℈j. *Theriac. And.* ℈j. *Syr. Caryoph. m. f. Bol.*

℞ *Aq. Lact. Alex.* ʒiv. *Meliſſ.* ʒiij. *Menth.* ʒj. *Epidem* ʒj. *Marg. ppt.* ʒj *Sacch. alb. q. ſ. m. f. Fulap. e quo Capiant. Cochl.* vj. *in Languoribus* (*Phialâ priùs agitatâ.*)

℞ *Aq. Scord.* ʒiij. *Naph.* ʒij *Cinnam. h.* ʒiß. *Mirab.* ʒß. *Marg. ppt.* ℈ij. *Sacch. Cryſtall. q. ſ. m. f. Fulap.*

℞ *Aq. Flor. Tiliæ* ʒiv. *Protheriacal.* ʒj. *Ceraſ. n.* ʒjß. *Epidem.* ʒj. *Sacch. alb. q. ſ. m.*

℞ *Aq. Borrag.* ʒj. *Bugloſs.* ʒij. *Epid.* ʒß. *Sp. C. C.* ℈j. *Syr. Caryoph.* ʒiij. *m. f. Hauſtus.*

℞. *Sp. Fuligin.* ℈ij. *In Vehiculo detur.*

℞ *Pulv. Cantharid. (demptis Alis & Pedibus.)* ℈j. *Ferment. acerrim.* ʒj. *m. f. Emp. Veſicatorium largum pro Nuchâ.* Vel,

Admoveantur Emp. veſicator. Nuchæ, & Carpis; vel etiam Brachiis Internis, vel Suris, &c.

Admoveantur Cataplaſm. Solear. Batean. Soleis.

Si Animus tibi ſit Ulcuſcula a Veſicatorio excitata aperta ſervare; *admoveatur Emp. Veſicatorium perpetuum*, quod ſic communiter faciendum curavi. *Infunde Cantharid. pulv.* ℈j. (*In petiâ ligat.*) *In Aq. Bullient.* ʒx. *tum Injiciatur Baſilic.*

ad ʒij. *Ponantur omnia ſuper Ignem lentiſſimum, ut omnis Aqua ſenſim Evaporetur ; Sicque Sal Cantharidum Unguentum Virtute ſuâ Imprægnabit, quod debilius vel fortius (additione vel Subſtractione unguenti) fieri poteſt ; Pro Uſu ſervetur ; hoc enim, Emp. Meliloto ſuperinductum, Serum in Quantitate ſat largâ exprimet, nec Fraus facilè detegetur. In Filiolâ meâ Dyſuriam ſat moleſtam excitabat.*

A Lassitude : *In this Caſe 'tis* Laſſitudo Ulceroſa.

Præmiſſâ Catharſi ex Sennæ foliis : fac ut ſe diſponant ad Madorem, Infuſo e Foliis Tea (Bohe) *Saccharato.*

A Vertigo.

Primis Viis purgatis ; Capiant Miſturam (ex Sp. Lavend. ʒβ. *Tinct. Caſtor.* ℈j. *Sal. vol. oleos* ʒij. *in Vehiculo appropriato.) ad gut.* x.

Head-ach.

Proritetur Alvus, Aquâ Salitâ ; Applicetur Veſicatorium Nuchæ. ℞ *Sp. C. C.* ʒj. *Aq. Hyſteric.* ʒiij. *m. f. Epithema (Vel Sp. Rnæ. Hung.)* ℞ *Pulv. de Gutt.* ʒj. *capt. in Infuſo Thea.*

Deliria.

Quia in Statu vel paulo ante eum Evenire ſolent Deliria, ideo præſupponitur Evacuationes debitè præmiſſas fuiſſe : Nil ergo agendum reſtat, niſi ut admoveantur Emplaſtra veſicatoria, *pauciora vel plura,*

plura, pro Spirituum Vacillationis & νεκρώσεως Modulo: Porrò Emplaſtra vel Cataplaſmata Solearia, (*ex Emplaſt. Cephalic. cum Euphorb. & Ol. Mac.*; *vel Sem. Sinap. pulv. Porrò Contuſ.*; *ſeu Allio cum Oxymel. Scillit. ſeu Halece ſalito*) *vel ſimilia, admovenda ſunt.* Et,

℞ *Cinnab. Antim.* ʒj. *Bezoard. Miner.* ʒß. *Camph. gr* iv. *Laud. opiat. gr.* ij. *Syr. Croc. q. ſ. M. f. Bol. no* ii. *Capiant* j. *Horâ quâque* 7*mâ, vel ſæpius ſi requiratur, vel proſit.* Vel,

℞ *Aq. Paralyſ.* ʒiij. *Epilept. Lang.* ʒß. *Sp. C. C. gut.* xx *Laud. liq. gut.* xxx. *Syr. de Mecon.* ʒiv. *m. pro duabus Doſibus.*

℞ *Pulv. Rad. Serpent. Virg.* ʒß. (℈ij.) *Saccb. Saturn. gr.* v. *Theriac. Androm.* ʒjß. *Syr. de Mecon. q. ſ. m. f. Bol. no.* ij. *Capiant* i. *Horâ quâque* 5*tâ*, 6*tâ*, *&c. Superbibendo Cochl.* iij. *Julap. ſeq.*

℞ *Aq, Meliſſ. Flor. Tiliæ* ā ʒiv. *Hyſteric.* ʒ ij. *Sp. C. C.* ʒß. *Syr. Papav. Rhœad.* ʒ j. *m f. Julap.*

Convulsions.

Præmiſſis Catharſi, Enematibus, vel Emeticis: Admoveantur Emp. veſicatorium unum vel plura: hic tamen monendi ſunt Medici ne nimium Evacuent: at Analeptica, Cephalica, & Opiata ſunt Medicamenta, ſuper quæ Cardo Medelæ vertit. Hinc,

℞ *Cinnab. Antim. gr.* vj. *Sal. vol. C. C. gr.* j. *Cran. human. pulv.* ʒ ß. *Laud. opiat. g.* j. *Syr. Caryoph. q. ſ. m. f. Bolus, quâque Horâ, 4tâ, 5tâ, vel 6tâ, repetendus cum Cochl.* vj. *Julap. ſeq.*

℞ *Aq. Flor. Tiliæ* ℥iv. *Puleg. Rut. Ceraſ. n. a.* ℥iij. *Tinct. Caſtor.* ℈j. *Caſtor. (in Petiâ ligat. Et ſuſpenſ.) gr.* vj. *Sacch. alb. q. ſ. m. f. Julap.*

℞ *Theriac. Androm. (cum Ol. Succin. malaxat.) q. ſ. m f. Cataplaſmata Solearia.*

Si Subſultus Tendinum *Ægros divexent, ſumantur gr.* iij. *vel* iv. *Ent. Vener. in Conſ. Flor. Anth. cum Vehiculo ſpecifico ſæpius in die.*

Coma's, Lethargies, *&c.*

Admoveantur Emplaſt. Veſicator. Nuchæ & Brachiis internis.

℞ *Piper. Euphorb. Calam. aromat Pyreth. a* ℥j. *Ceræ* ℥j. *Ol. Succin q ſ. m.f. Linimentum pro Cervice ungendâ.*

Bibant Copiosè Tea ex Satureiâ factum.

Lotiones Pedum fiant cum Decocto vel potius Infuſo ex Herb. & Rad aromaticis (viz. Angelic. Calam. arom. Majoran. Lavend. &c.)

Suffiantur Nares Sulphuris Fumo, ſeu Sp. Sal Armon. cum Calce fact. Capt. gut. x. *vel* xv. *Sp. C C in Vehiculo appropriato.*

Sique Symptomata hæc ſint periodica, miſceatur Cortex Peruv. cum Tea, ex Fol. Bohea.

Watchings.

Hic Obiter moneo, ne medici Virgiliis Criticis, ſeu ab Inquietudine Criticâ ſuſcitatis, Auxilium præbere prætexant.

Si

Si Spiritus Erigere Conemur, Vigilias abigemus, quæ hoc in Caſu planè vacillantes Vires arguunt: & uti Senum Vigiliæ Umbratis & Cardiacis tolluntur, ita ubi adſint Spirituum Debilitas & Paucitas, & inde Vigiliæ, iiſdem plane Remediis, eos ſupplere debemus; Quibus ſic reſtitutis, Symptomata exinde generata neceſſario truncantur. Sit igitur Diæta Analeptica ex Pullis, In Gelatinam coctis, ex Julapio Vitæ cum Similibus, cum Diætâ pauxillùm vinoſâ.

Colicks, Iliack Passion.

Elutrientur Humores Sennâ in Aquis Cordialibus Infuſâ (modo neceſſariò Catharticum requiratur;) quod manifeſtant Plenitudo quædam in Hypochondriis & Tenſio a Flatibus; dein Rob. e. Bacc. Junip & Laur. cum Antim. Diaphoret. cum & Laudano Rem perficient; Item quandoq; ſumant Sp. Junip ℥j. Aq. Menth. ℥ij. Vitell. Ovi. no. j. Sacch. q. ſ m. f. Hauſtus Carminativus, ſeu Eleo-Sacchara Cinnamomi, Carvi & Similia. Si Sedes ipſius ſit in Partibus Inferioribus, Enemata cum Succeſſu injiciuntur, uti ſæpius expertus ſum.

Thirst.

Hoc in Statu quàm optimè Potu ex Thea, Salviâ in Aquâ Infuſâ, Sero Canarino, Decocto Santali cum Cort. Aurantiorum Saccharato Sedatur; Os, Mucagine albâ obductum, Eluatur Acrimoniam Temperantibus, & Abſtergentibus, (viz.)

Horrors,

Horrors, Rigors,

Si graves ſint periculumq; minentur, Vino Calid. auferantur; & Horrorem, in Puerperâ per Horæ Dimidium, & quod excurrit, durantem, Sp. C. C. ad ʒj. *& amplius, partitis Vicibus, non ſolum ſuſtuli: At porro Sudores copioſos per Horas ſex fluentes placidè, & Symptomata Levantes excitavi, & Febrem ex toto abegi. Leves ſi ſint, ſunt Malignitatis Indices; nil tamen Remedii poſtulant, præterquam quæ Febris Specie exiguntur.*

A Dyspnœa.

Epiſpaſticis, Alexipharmacis generoſioribus, ut in Genere, alleviatur.

Verminous Fevers.

℞ *Pulv. Ent. Vener.* ʒß. *Conſ. Abſinth. rom.* ʒij. *Syr. e Cichor. cum Rheo. q. ſ. m. f. Bol. No.* iv. *capiant* i. *Horâ quâq; octavâ cum Cochl.* vj. *Vini Hermetici,* (viz. *Vini, in quo Mercurius vivus infunditur.*)

℞ *Æthiop. Mineral.* ʒj. *Sacch. alb.* ʒij. *m. f. Pulv. divid. in Chart. No.* iij *capiant* j. *quâq; Horâ, octavâ in Cochl.* iij. *Vin. rubri.*

℞ *Præcipitat. Veuer. gr.* v. Etmuller. p. 626.

℞ *Pulv. Aurei.* ʒß.

Et Lucas Tozzi Medic. Practic. Part. 2. ait, *Omnis Timor abeſt, ſi des Vermibus inimica, quia Enectis Vermibus, deſinit Febris,* &c.

Fel

Fel Bubulum cum Aloë admoveatur in Formâ Unguenti Umbilico, ſuper Veſicam extendatur.

Puerperal Fevers.

Etmullerus *ſic præſcribit :* ℞ *Antimon. Diaphor Cinnab. Antim.* ā ℈j. *Sal. vol. Sang. human.* ℈ß. *Sal. Volat. Succin. gr.* vj. *Myrrh. gr.* iv. *m. f. Pulv. No.* ij. *Capiant in Aq. Ulmariæ cum Syrupi pauxillo.*

℞ *Aq. Puleg. Rut. a.* ℥iijß. *Epilept. Lang.* ℥j. *Caſtor.* (in *Nodulo ſuſpenſ.*) ℈ß. *Tinct. Croc.* ʒß. *Sacch. Cryſtall. alb. q. ſ. m. f. Julap. ad Libitum pitiſſandum. Etiam omnia, Febris Speciei, Remedia contrarientur, uti ſuprà ſat copioſe indigitavimus.*

Symptomatical Sweats.

Quæcunq; Spiritus labaſcentes exhilarant, eoſq; vacillantes reſarciunt, Sudores iſtos reprimunt, & Criſin promovent : Quia Sudores hi ex ſymptomaticis, proficui & utiles evadunt ; unde conſule Præſcripta præmemorata.

Hæmorrhages.

Hoc in Statu quoties vidimus Homunculos miſerrimè εἰς ἅιδου miſſos præpoſtero Lancettæ Uſu ? Ἐναντίωσις ſerio conſideranda. nam ſi Sanguinem Cardiacorum generoſiorum Uſu nimium evehamus, ejuſq; Compagem ſolutam nimis reddamus, vehementius erumpet ; ſi Incraſſantia & Styptica exhibeantur, magis dietim Maſſa coagulabitur, & inepta fiet quæ Spiritus generet, Particulaſq;

noxias

noxias e Sinu ſuo expellat : Remedia ergo commiſcenda ſunt.

℞ *Pulv. e Chel. Canc. C.* ʒj. *Vitriol. Mart. ad Albedin. Calcinat. gr.* vj. *Marg. ppt.* ℈j. *G. Arab. Pulv.* ℈ß. *Theriac. Androm.* ʒjß. *Syr. Myrtin. q. ſ. m. Bol. No.* iv. *Capt.* j. *Horâ quaq; quartâ ſuperbibendo Cochl. aliquot Julap. ſeq.*

℞ *Aq. Plantag. Rut. a* ʒiij. *Cinnam. h.* ʒj. *Epidem.* ʒß. *Acet. deſtillat.* ʒj. *Syr. Caryoph.* ʒß. *Diaſcord. Fracaſtor.* ʒj. *m. f. Julap.*

Turundæ ex, Cretâ, Naſo intrudantur, vel Pulv. Colcothar. in Nares (ſi ferre queant) inſufflentur.

Fluxes.

Febris *Alexipharmaca & Cardiaca poſtulat ; &* Fluxus *Styptica, Glutinantia, ob Meatum apertum, requirunt ; unde ſimul permiſta, Effectus ſuos ſortientur.*

Talia ſunt Teſtacea, Margaritæ, Oc. Cancror. Sal. Abſinth. Sp. C. C. Terra ſigillata, Terra Lemnia, Sang. Dracon. Vitriolum Martis, Croc. Mart. Aſtring. & ſimilia.

Inflammations.

Etmullerus, in Pleuritide a Lochiis ſuppreſſis hæc habet :

℞ *Aq. Puleg. Papav. Rhæd. a* ʒj. *Antim. Diaphoret.* ℈j. *Sal. vol. armon. gr.* vj. *Sal. volat. Succin. gr.* iij. *Caſtor. gr.* ij. *Syr. Card. b.* ʒß. *M.*

Aperientia

Aperientia *ergo mitia exhibeantur, ut Coagulum præoccupetur, ſaltem ut genita Obſtructio amoveatur; & Motus inteſtinus ſedetur* Anodynis, Tenuibus externè Diſcutientibus & Emollientibus, *Circulatio Humorum, Sanguini rurſum concilietur.*

Anomalia, ſeu Retroceſſio Puſtularum, Bubonum, *&c.*

℞ *Antim. Diaphor.* ʒß. *Camph. gr.* vj. *Cinnab. Antim.* ∋ß. *Syr. Croc. q. ſ. m. f. Bolus quâq; Horâ quartâ reiterandus cum Julapio Perlato ad Cochl. aliquot. Veſicatoria admoveantur.*

Intermittent or Remittent Fevers.

Præmiſſis Evacuationibus propriis (à Specie Febris indicatis.)

℞ *Cort. Peruv. opt. ſubtiliter pulv.* ʒj. *Syr. Limon. q. ſ. m. f. Electuarium molle, cujus capiant Quantitatem Caſtaneæ quâq; Horâ* 3tiâ *vel* 4tâ, *in Remiſſionibus, ad Febris Evaneſcentiam.*

℞ *Sal. Abſinth.* ʒj. *Sp. Vitriol.* ∋j. *Aq. Abſinth. C.* ʒij. *Ceraſ. n.* ʒj. *Menth.* ʒß. *Syr. Caryoph. q. ſ. M. f. Miſtura pro duabus Vicibus ante Paroxyſmum exhibenda.* Crollius.

Novi Intermittentes Pulv. Flor. Chamomill. ad ʒß. *ter de Die fugatas.*

Novi item Febres Intermittentes, quaſi Carmine magico, Emplaſtro Cinnabarino, Ventriculo admoto, ſublatas.

Species

Species Febris in Paroxyſmo conſideranda, & Remediis prænominatis ſublevanda eſt.

Pestis, Febris Pestilentialis.

Hâc in Re Authoribus Fides adhibenda eſt; & ſiquidem omnes, uno Ore, Diaphoreſi conſulunt: Hiſce ſolis aggredienda eſt.

Quidam Emetica, alii V. Sectionem, alii Glandes, quandoq; Cathartica mitia præmittunt; tum Diaphoretica exhibent. N. Hodges *dat Sp. C. C.* ℈ij. (℥j.) *ex Aq. Epidemic.*; *& Sudoribus promanantibus Cereviſiam vult ſalviatam affatim dari*; & hoc in omni Sudore critico notari velim, ut copioſe bibant quamprimum Sudores prorumpunt.

Sydenham, *præmiſſâ Venæ Sectione*, ℞ *Theriac. Androm.* ℥ß. *Elect. de Ovo* ℈j. *Pulv. e Chel. Cancror. C. gr.* xij. *Coccinel. gr.* viij. *cum Succ. Kermes.*

℞ *Aq. Card. b. Scordii Comp.* ā ℥iij. *Aq. Theriacal. ſtillat.* ℥ij. *Syr. Caryoph.* ℥j. *m. f. Julap. Capiant Bolum 6tâ quâq; Horâ, ſuperbibendo Julap. hujus Cochl.* vj.

Etmullerus, ℞ *Antim. Diaphoret. Flor. Sulph. ā* ℥ß. *Sal. Viperar.* ℈j. *Camph. gr.* xv. *Sacch. alb.* ℥j. *m. divid. in Chart. No.* iij.

Barbette, ℞ *Extract. Prophylact.* ℥iß. *Oc. Canc.* ℈j. *Aq. Prophylact.* ℥ß. *Syr. Limon.* ℥j. *Acet. Sambucin.* ℥ß. *m. f. Hauſtus.*

Isb.

Isb. Diemerbroeck, ℞ *Aq. Theriacal.* ℥iij. *Succ. Citri* ℥ß. *Sal. Card. b.* ℥ß. *m. f. Hauſtus. Vel,* ℞ *Acet.* ℥ij. (iij.) *Sal. Commun.* ʒj. *m f. Hauſtus.*

Authores ergo Alexipharmaca pro Febris Modulo, mihi diverſificare & ſpecificare videntur.

Bubo.

Quamprimùm apparet, Chirurgi Munus eſt attrahere, maturare, & aperire; tum detergere, incarnare, & cicatrizare; Oleoſis, Veſicantibuſq; Diachylo, Lancettâ, Ægyptiaco, Tereb. in Vitell. Ov. ſolut.; Baſilico, & Unguento Diapompholigos. Interim Alexipharmaca, ne retroeat, exhibe.

Carbuncle.

Uratur; Cruſta ſeparetur; Ulcus curetur; Cauſtico potentiali circumillito (Butyro Antimonii;) Butyro recente, Oleo Lini; Ægyptiaco, Baſilico, Diapompholigos Unguentis. Alexipharmaca ſpecifica toto Tempore exhibenda ſunt interné.

As for Symptoms that come on after the Fever is quite vaniſh'd, it would be an endleſs Task to undertake to ſhew how to remedy them, therefore I muſt refer my Reader to his Leiſure to conſult.

CHAP.

CHAP. IX.

The DIAGNOSTICKS of

FEVERS.

IT may be aſcribed to me as a Fault, that I have no-where ſpoke of the *Diagnoſticks* of Fevers: I own, I have not taken any further Notice of them, than to demonſtrate that Fevers are only diſcriminated by their Degrees, and alſo to ſhew the two general Remarks neceſſary to illuſtrate the Methods taken in them: I am therefore willing to sketch out the Signs more at large, for the Satisfaction of ſuch Readers as may ſtand in need of them.

FEVERS *in General*,

Are known by a Quick and Frequent Pulſe, Heat, Thirſt, and Inquietude: A Horror or Rigor begins it; there is joined a Want of Appetite, a Laſſitude, a Diſcolour'd Tongue, (White, call'd *Cancer albus*, Black, Brown, *&c.*) The Pulſe has above a Hundred Strokes in one firſt Minute.

An ACUTE FEVER,

Is known by a great Heat and Thirſt, a ſtrong, equal, and frequent Pulſe. It ends ſoon.

A SLOW FEVER.

The Symptoms are mild: The Heat gentle, or ſcarce perceptible: It ends ſlowly.

A Fever between an Acute and Slow one, is term'd a *Mixt* or *Middle Fever*.

An

An Ephemera.

Some evident Cauſe has preceded: The Urine is like that of Perſons in Health (with Contents, *viz.* and Citrin:) No Rigors, according to ſome, precede it: It laſts 24 Hours But it ſometimes laſts many Days without any Remiſſions. We may gueſs it to be an *Ephemera* if the Patients were not ſickly before, and if it begins by ſome External Injury.

A Synochus Imputris.

It has a quick Pulſe and Heat, and the Urine is red, and has a copious Sediment: It laſts 7 Days without Remiſſion. *Sydenham*'s *Febris Varioloſa* 1667, which he ſays was rather an Inflammation of the Blood than any Humour which wanted to be expell'd, could be no other than this Imputrid *Synochus.*

A Putrid Synochus,

Has all the ſame Symptoms which an Imputrid one has, only this is more violent. It acquires various Names, according to the various Symptoms; 'tis call'd an *Aſſodes*, when a Pain of the Stomach accompanies, with a Tenſion of the *Hypochondres*; *Elodes*, when ſymptomatical Sweats infeſt us; *Epiala*, where the Perſons complaining of Cold, are Hot; *Syncopalis*, when the Decumbents are troubled with Faintneſs; *Rheumatica*, *Pleuritica*, *Anginoſa*, *Eryſepelatoſa*, *Dyſenterica*, &c. where 'tis accompany'd by theſe Symptoms. It has Remiſſions.

A Synochos, or *Continual Fever*,

Is a Mailgnant Fever : And though both *Ardent* Fevers and *Hectical* ones be Malignant, yet the latter is moſt commonly term'd ſo. The Heat, Pulſe, Thirſt, and all the Symptoms continue without Remiſſions, 'till it terminates by a *Criſis*. The main Complaint is, a great Dejection and Proſtration of Strength, a weak Pulſe, and an unequal one ; dangerous Symptoms of the Nerves ſupervene ſoon after the Seizure, with cold Sweats, dry Tongues, Black Thruſhes, Watchings, Deliria, Water pale or undigeſted ; and many more bad Symptoms.

A Pestilential Fever,

Is a Fever with Spots (whether Morbilloſe or Petechial) with a *Pulſus Myurus*, *formicans*, and an *imperceptible Heat*. They often die, though the the Urine appear concocted (though in many there is the κρεμνώδης *Hypoſtaſis*, and in others the ἔρον ἀνατεταραγμένον, according to *Willichius* ; and I have obſerv'd them.)

The Pestis.

Beſides the Urine mentioned in the Peſtilential Fever, there is ſmall Heat, a formicant and intermitting Pulſe, not frequent ; with great *Syncope's* and *Languors*, *Buboes*, *Carbuncles*, *black Spots*, *great Mortality*, and *very ſudden Death*.

The Hungarian Fever, (or, *The* Camp-Fever.)

A Fever with violent Head-achs and Cardialgia's, a Languor, Nauſeouſneſs, Hiccups, and Pain.

The

The HERPETICAL FEVER.

From a Fever join'd with a *Herpes Miliaris.*

The MILIARY FEVER. *The* RASH. COMPOUND MILIARY FEVER.

The *Simple Miliary Fever* is known by a Fever, and watry Bliſters breaking out about the Eleventh Day after the Seizure. This is the *Cryſtalli* of the Ancients.

The *Raſh* or *Rubeolæ*, are a Fever with Cough and ſome ſhort Breathings, and then red Tubercles breaking out.

The *Compound Miliary Fever*, is when a Fever ſeizes, with veſicated Eruptions, join'd with the *Rubeolæ*, Small-Pox, Meaſles, or *Petechiæ.*

Sir *D. Hamilton* adds to his *Tract*, that it is obſervable that theſe Fevers are diſcoverable by a Languor, an Oppreſſion at the Breaſt, and Sighings; which indeed are Symptoms common to all Eruptive Fevers, and obſerv'd by Authors.

The SCORBUTICK FEVER.

Is a Fever, of what ſort ſoever, accompany'd with *Scorbutick* Eruptions.

The CRAPULAR FEVER.

This Fever is often accompany'd with Lurid Eruptions appearing the 7th or 9th Day.

Particular Fevers.

Ballonius L. de Virgin. & Mulier. Morb. C. 7. calls ſome Fevers *Cephalick*, *Hepatick*, *Stomachick*, *Lienoſe*, &c. and we often ſee *Pleuritick*, *Anginoſe*, and ſuch Fevers ſeizing on a Part. *Theſe Sorts of Fevers are never Intermitting, but Continual,* ſays *Foreſtus, if they be Symptomatical only.*

A Fever *on the* Spirits, (Syncopal Fevers, Cardiaca Passio.)

They are only Malignant Fevers, join'd with a Deſpondency.

The Lacteal Fever,

Is a Fever coming on the Third Day after Labour, from the Milk in the Blood: There is a Horror goes before it, if it turn into a *Synochus putrida:* The Breaſts ſwell: They are pain'd in their Backs and are Reſtleſs.

The Puerperal Fever.

The common Symptoms of a Fever forerun: They have Pains in the *Abdomen*, *Hypogaſtria* and Loins. I ſuſpect it to be Inflammatory moſtly. 'Tis from the *Lochia* ſuppreſs'd.

A Colliquative Fever,

Is a Fever attended with Sweats, *Diarrhœa's*, or ſome ſort of Evacuations.

The

The Worm-Fever.

Is a Fever rais'd by the *Seminium* of the Worms in the Inteſtines, and is judg'd to be ſuch, by Verminous Symptoms with a Fever.

The Diætetick Fever,

Is only a Fever occaſion'd by playing the Gourmand.

A Catarrhal Fever.

It happens from catching Cold; and is a Cough with a Fever coming on after it; where are ſmall Shiverings, with Heat and Cold ſucceeding each other, a Heavineſs of the Head, as in wet Weather, red Eyes, a Noiſe in the Ears, a Stoppage of the Noſe, Hoarſeneſs, and all other Symptoms of a Cold. It may be called a *Feveriſh Catarrh* or a *Lymphatick Fever.*

A Febris Lenta,

Is a Symptomatical Fever produc'd from ſome Ulcer in the Lungs, or elſewhere. This has three Degrees, according to the Ancients.

A Hectick,

Is diſcoverable from a *conſtant* though *gentle Heat* (encreaſing after Meat,) a *frequent Pulſe*, and an *Atrophy*. The *Heat* is moſtly perceptible in the Palms and Soles: The *Pulſe* is, according to *Floyer*, 100 out of the Fit, and 120 in the Fit: The *Atrophy* is from the Colliquation, by *Sweats*, *Diarrhœa's*, &c.

A Hysterick Fever,

Is a Fever with *Hyſterick* Symptoms. The ſame is to be ſaid of *Hypochondriack* ones.

An Erratick Fever,

Is a Fever that obſerves no certain Order nor manner of Invaſion: ſometimes it ſeizes with Rigors; ſometimes with Sweats, at other times with neither; ſometimes with Vomitings, at other times without 'em: 'Tis call'd *Erratick*, becauſe it wanders in Variety, ſo as neither to keep any ſtated Time nor Order in its Acceſſions or Remiſſions. 'Tis never *Continual*, but *Periodical*, ſays *Foreſtus*.

The Small-Pox. *The Diſtinct Species*

From a Pain in the Head and Back, weeping Eyes, Vomitings, Coughs, and Fever; one or two Puſtules break out in the *Apparatus*. The 3d Day the Puſtules break out red, rough, and very ſmall, and daily grow bigger 'till the 4th and 5th Day, by riſing higher, growing broader, and inflaming. The 6th Day they begin to ripen. The 9th Day they ſcab and fall off gradually.

The Coherent Kind.

They run together in two or three Places in the Face. They appear the 3d Day: And fall off the 11th or 14th Day. They Salivate.

The Flux Kind.

Their Numbers are ſo great, that they riſe very little in the Face. The 8th Day they ripen, and are

are firſt White, then Yellowiſh, and laſtly Black: The Fever is Continual, through all the Stages of them. They fall off the 17th or 20th. The 3d Day they appear: The 11th, the Salivation leſſens 'till the 13th, when it ſtops, and the Face falls.

The MEASLES *and* SCARLET FEVERS.

They differ as the Diſtinct and Flux-Pox.

Over and above the common Signs of Fevers, they Breathe ſhort, have an Oppreſſion of the Hypochondres, they Cough, and Sneeze. On the 4th Day, or 5th, a Redneſs ſeizes the Scarff-skin, which is of no certain Figure. The 6th Day they grow rough. The 8th they ſcale, and then vaniſh.

In the SCARLET,

They appear later: The Skin is as if it were dyed with Claret; they ſcale in great Flakes; and the Fever is often Continual.

INTERMITTING FEVERS,

Is when every Day, every other Day, or every fourth Day, there is an Απυρεξία. But *Cheſneau* having mark'd 'em after a peculiar Manner, I ſhall take the ſame Liberty with all of them; which will ſpare me ſome Words.

A Quotidian iij.	*A Quintan* iiij.
A Tertian iij.	*A Sextan* iiiij.
A Quartan iiij.	*A Novan* iiiiiij.

A Double Tertian $\frac{\text{iiij.}}{\text{iiij.}}$ *then* | *A Doub. Quintan* iiiiiiij.

A *Semi-tertian* is compounded of a *Quotidian, Continual,* and an *Intermitting Tertian:* So that one Day they have Vomitings, *&c.* The next Day (or the *Well-day,* as it is commonly term'd,) they only have the Simple Fever.

A *Baſtard Tertian* is only a Protraction of the Fits.

I'm afraid I have by this Time ſufficiently tir'd my Reader, and ſhall only add, That having rang'd the Prognoſticks of all Diſeaſes into ſuch a particular Order, that they can't eaſily be diſmember'd, I could not inſert *them* here; I muſt therefore crave the Reader's Excuſe 'till my Leiſure will allow me to publiſh that Piece.

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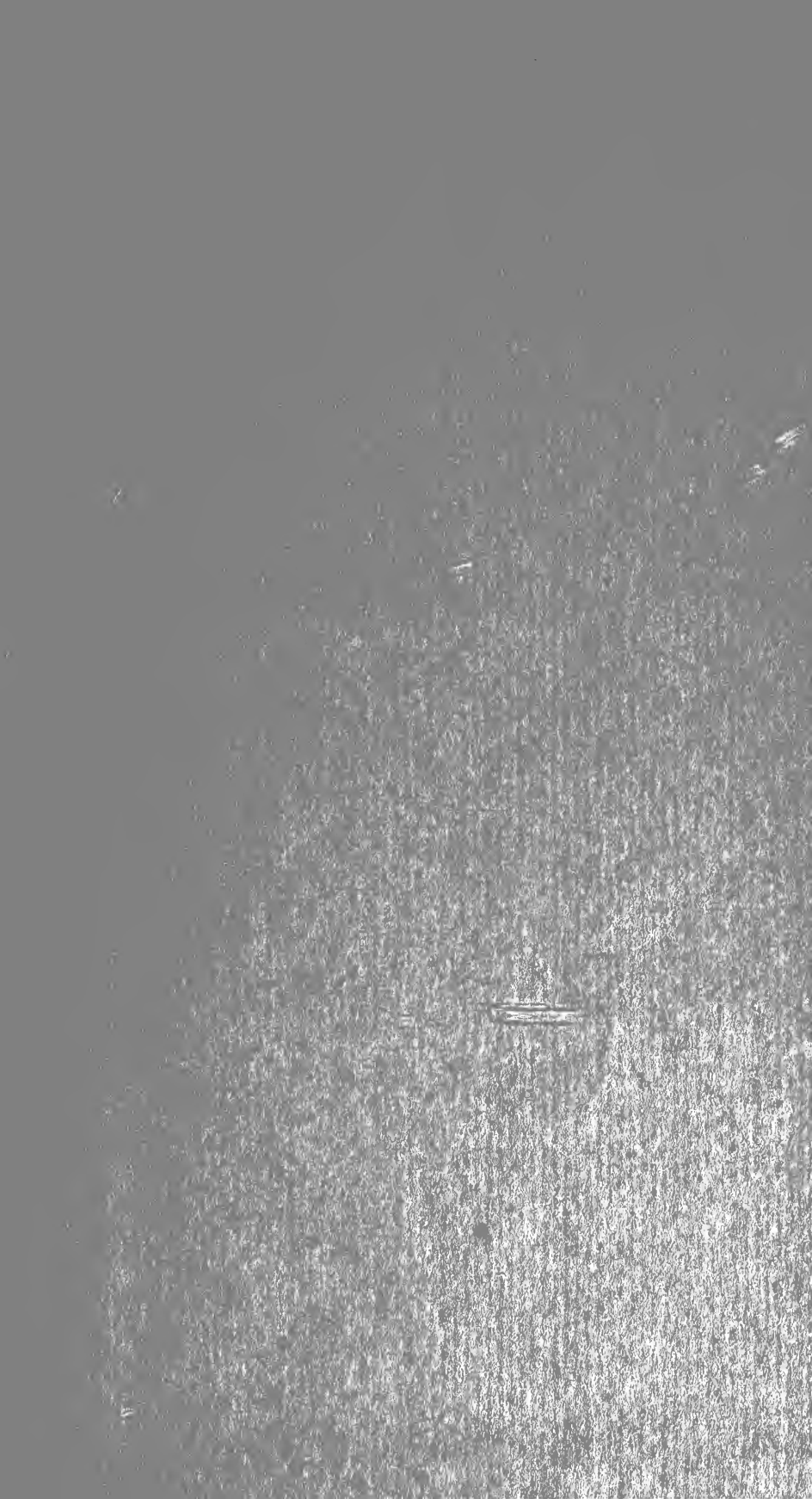
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